



ACTIVITY APPROVAL DOCUMENT

INCREASING RURAL HOUSEHOLD INCOMES IN KENYA THROUGH HORTICULTURE

A DESIGN PROPOSAL

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“The challenge facing Kenya today is to reduce poverty and achieve sustained economic growth for a healthy national development. The government has shown commitment in addressing this challenge in consultation with key stakeholders in the economy especially the private sector and the civil society organizations and other development partners.”

“The strategy to achieve this goal entails the participation and inclusion of all Kenyans, especially the poor, in the design and implementation of the strategies aimed at tackling the challenges posed by poverty.”

“The government in liaison with the other stakeholders has come up with the Poverty Reduction Strategy Paper (PRSP) which extensively outline the priorities and measures necessary for poverty reduction and economic growth.” (The PRSP – Market Intelligence. Nov/Dec, 2001)

“Some 80 percent of the Kenyan population lives in rural areas, and 75 percent are somehow involved in agriculture. Kenya’s economy is therefore heavily dependent on its agricultural productivity. Over the past decade, however, agricultural productivity has declined and poverty has increased”.

“While poverty is found in both urban and rural areas, 75 percent of the poor are in rural areas. USAID/Kenya will therefore focus on increasing the incomes of rural households in selected high and medium potential and arid and semi arid lands, most of which already rely on a combination of on- and off-farm activities.”

“The Mission’s new strategy for agriculture and enterprise development [Strategic Objective 7 – Increased rural household incomes] continues to focus on rural-based economic growth as the basis for addressing Kenya’s poverty.” (USAID/Kenya 2000)

“Voicelessness and powerlessness are key dimensions of poverty.” (The World Bank World Development Report, 2000).

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The particular contributions of David Neven to the academic literature portion of this work, is specifically and most gratefully acknowledged.

Acronyms and abbreviations

ABEO	<i>Agriculture, Business, Environment Office</i>
ACP	<i>African Caribbean Pacific Countries</i>
ACP-EU	<i>African Caribbean Pacific European Union</i>
AEZ	<i>Agro-ecological Zones</i>
BSF	<i>Business Services fund</i>
CBO	<i>Community Based Organization</i>
CMA	<i>Catchment Management Area</i>
CIN	<i>Consumer Information Network</i>
COMESA	<i>Common Market for East and Southern Africa</i>
CRS	<i>Catholic Relief Service</i>
DFID	<i>Department for International Development</i>
DIU	<i>Provincial Irrigation Units</i>
EAC	<i>East African Community</i>
EU	<i>European Union</i>
FAO	<i>Food and Agriculture agency of the United Nations</i>
FAULU	<i>Micro Finance organization</i>
FFS	<i>Farmer Field Schools</i>
FPEAK	<i>Fresh Produce exporters Association of Kenya</i>
GoK	<i>Government of Kenya</i>
GTZ	<i>Deutch Gesellschaft fur Technische Zusammenarbeit</i>
HCDA	<i>Horticultural Crops Development Authority</i>
ICRISAT	<i>International Crop Research Institute for the Semi-arid Tropics</i>
ICIPE	<i>International Center for Insect Physiology and Ecology</i>
IDB	<i>Irrigation and Drainage Branch</i>
IPM	<i>Integrated Pest Management</i>
IPAR	<i>Institute for Policy Analysis Research</i>
IR	<i>Intermediate Result</i>
ISP	<i>Integrated Strategic Plan</i>
JICA	<i>Japan International Cooperation Agency</i>
KARI	<i>Kenya Agriculture Research Institute</i>
KEBS	<i>Kenya Bureau of Standards</i>
KEWI	<i>Kenya Water Institute</i>
KFC	<i>Kenya Flower Council</i>
KIPPRA	<i>Kenya Institute for Public Policy Research Analysis</i>
KREP	<i>Micro Finance organization</i>
MoARD	<i>Ministry of Agriculture and Rural Development</i>
MRL	<i>Maximum Residue Levels</i>
MSE	<i>Micro and Small Enterprises</i>
MSU	<i>Michigan State University</i>
MWR	<i>Ministry of Water Resources</i>
NGO	<i>Non-government organization</i>
PFID	<i>Partnerships for Food Industry Development</i>
PIU	<i>Provincial Irrigation Units</i>
SDPH	<i>Systemic Development Program for Horticulture</i>
SIDA	<i>Swedish International Development Authority</i>
SO7	<i>Specific Objective 7</i>
WDD	<i>Water Development Department</i>

Executive Summary

- This design report is written following a wide-ranging study of the past and current strengths and weakness of horticulture in Kenya from the perspective of its role in enhancing rural household incomes in that country, and of the major opportunities and threats that the future might hold in this regard.
- This particular focus, which reflects Specific Objective 7 in the Integrated Strategic plan of the USAID/Kenya Mission, represents a significant shift from the majority of past initiatives in Kenya horticulture. The strategic intention is to focus not on the horticultural sector or on export markets *per se*, but on the livelihoods of people, especially smallholders, who grow horticultural produce, earn wages through horticultural enterprises, or provide some form of horticultural services.
- The implications of this shift in emphasis are profound and the challenge is immense as there are well over one and a half million smallholders in Kenya who currently grow fruits and/or vegetables of some form or another. Only a small handful of these producers grow for the export markets which are, in turn, dominated by a very small number indeed, of export traders.
- Many of these markets, furthermore, are increasingly vulnerable in the face of growing competition from exports from other nations as well as increasingly rigorous consumer demands that are influenced by concerns about ethical and ecological matters related to the production and marketing of horticultural produce, as well as the quality and safety of the produce itself.
- Domestic markets for fruits and vegetables within Kenya are relatively poorly developed, although the levels of consumer discrimination are rising, particularly within large cities like Nairobi and Mombasa.
- Many of the smallholders who grow vegetables and fruit have only made the change from subsistence forms of production to commercial ones over recent years. These have been times during which the Kenyan government has been in the process of adopting structural reforms that include market liberalization and public service rationalization.
- The situation facing those who are committed to helping improve the income of rural households through horticultural enterprises in Kenya is thus extremely complex. Traditional approaches to development have rarely even acknowledged such complexity let alone methodologically embraced it.
- The activities being recommended in this design report are based on the logic that new foci for development demand new approaches to development.

- The Systemic Development Program for Horticulture (SDPH) proposed here envisages USAID/Kenya establishing a decentralized but ‘networked’, ‘district-based’ initiative through which groups of smallholders are introduced, through a process of on-going experiential learning, to an approach to the development of their horticultural enterprises that is systemic in its nature.
- The focus will be on an approach to development that emphasizes concurrent and collective attention by the participants in the process, to all of the elements of the value-chain -- from markets, through post-harvest facilities and services, and production, to input commodities and services -- with respect to their potential for improvement. The focus will also extend to include critical considerations of the institutional contexts in which the smallholders operate as well as of potential impacts of change on the bio-physical and/or socio-cultural environments.
- Participating smallholders will learn about the issues that they face across the whole value chain, along with the nature of the institutional context that influences its operations, as they are involved in its daily workings. They will learn about consumer wants and other characteristics of a range of markets from local domestic to high value and high volume export. They will also learn about new and innovative production practices, about inputs and how to access them, about institutional contexts and the power of collaboration, and about the nature and dynamics of the environmental impacts of their practices: And all from the new ‘systemic’ perspective that the program facilitators will bring to bear.
- They will learn from their own experiences, from each other, and from resource people across a wide spectrum of agencies and institutions with whom they will learn to collaborate. Through their collective learning, they will become empowered to access services often traditionally denied them. Collaboration will lead to the development of ‘coalitions for development’
- The basic organizational focus will be on self-organizing groups of smallholders networking with other people and with institutions that provide knowledge and services appropriate to the development of the members who comprise the groups.
- Participation in the program will lead to increased opportunities for the incomes of rural households to rise. Production will respond to market intelligence while productivity will be improved through more informed husbandry practices, higher skill levels and greater access to, and more efficient use of inputs. Transaction costs, as they become more transparent, will be reduced.
- The four essential, and interrelated foundations of the approach are (a) participation, (b) learning, (c) empowerment, and (d) networking, within a system where incentives are explicit, capacity development enabled, and the development of trusting relationships and powerful coalitions firmly encouraged.

- The essence of the approach is ‘empowerment through learning’ and as such it shares much in common with the successful experiential programs of Farmer Field Schools (FFS) that have been conducted in a number of countries including Kenya, by FAO.
- The FAO approach uses Integrated Pest Management (IPM) as the organizing focus and vehicle for learning. In the proposal here, the vehicle for learning will be a model of systemic development that incorporates (a) analysis of the strengths, weaknesses, opportunities and threats across ‘value chains’ that are ‘site specific’, (b) development of actions that represent potential desirable and feasible improvements as reflected in improved rural household incomes, and (c) evaluations of the possible impacts of mooted changes, on bio-physical and socio-cultural environments. In other words smallholders learn about the whole process of commercial horticulture, including potential negative impacts, through being engaged in everyday activities associated with its systemic development.
- Just as with the Farmer Field School’s, ‘learning agendas’ will be generated and facilitated through skilled ‘in-district’ facilitators.
- The design specifically envisages groups of smallholder farmers learning to deal with their own issues of development through formal exposure to projects that they themselves generate, often in association with agencies such as NGOs or CBOs, with invariable access to the services in the formal public sector and private sector institutions – which will be partially self-funded.
- The key resource provided by the program will be “district facilitators”.
- These facilitators, with the help of appropriate international and national authorities in systemic development, and with the crucial participation of smallholder stakeholders, will help them to design practical programs of activities appropriate to the districts in which they are operating. They will most likely be graduates in horticulture/agriculture.
- The facilitators will work with a number of different groups in their district, visiting each in turn for a formal workshop every two to three months depending on local circumstances. These will be learning sessions rather than training programs, where the issues that constitute the curriculum will be those that arise through the farmer’s own concerns, issues, opportunities etc workshop. Groups will ‘turnover’ on at least two occasions during the period of the program.
- The overall program will be managed by a team that is composed of a Program Manager plus a number (3-7 depending on the level of funding provided) of appointed ‘district’ program facilitators who will work with groups of collaborating smallholders essentially as facilitators of their on-going development through learning.

- Two organizational models suggest themselves. The facilitators (a) could either be drawn from HCDA or the District Offices of the Ministry of Agriculture and Rural Development who would be seconded to the program, or (b) they could be independent employees of the program for its duration.
- The program manager and district facilitators will participate in a professional development program that will consist of (a) an initial, intensive three month orientation program conducted in a regional center within Kenya, (b) a one month follow-up workshop within six months of the initial program (possibly in the United States depending on funding), and (c) a series of one to three week workshops conducted in each of the following four years of the overall SDPH program. Other learning opportunities including ‘on-line study packages’ on a variety of aspects of systemic development will also be made available to them.
- The facilitators will be expected to apprise themselves of the wide range of initiatives and resources already available in Kenya relating to horticultural production and marketing, and to develop networks of contacts appropriate to the tasks identified. These networks will include both private and public sector organizations, district and local government agencies, even schools.
- Each district program will reflect its own idiosyncrasies with respect to consumer demand, post-harvest needs, production techniques, input supplies, and institutional contexts. Access to particular requirements within any of these domains, will reflect needs that are specific to emergent issues – ie., be essentially demand-driven.
- Five key ancillary projects have also been designed to provide examples of vehicles for the ‘development through learning’ process. These include initiatives in Consumer Research, Consumer Education and Awareness, Agribusiness Linkages, Business Services, and Farmer Organization and Field Schools.
- It is envisaged that by the third year of the program, a significant number of “farmer facilitators” will have emerged through the development process and will benefit from “leadership training” which the program would organize. These farmer leaders would be encouraged to start new groups of their own.
- It is vital that the program be established in the first instance for a minimum of five years, as the ‘systemic development through learning’ approach as described, cannot be rushed. Thought should also be given to mechanisms through which the initiative can become formally associated with an appropriate Kenyan academic institution of higher education/research to facilitate a strengthening of systemic development capacities in the country.

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Introduction

In its Integrated Strategic Plan (ISP) developed for the years 2001-2005 with respect to agriculture and enterprise development, the USAID/Kenya Mission heralded the introduction of a revised specific objective (SO 7) - increased rural household incomes - with renewed emphasis on rural-based economic growth and a continued focus on smallholder producers who constitute the rural poor. The Mission identified horticulture as one of three commodity areas that had the most potential for increasing rural household incomes.

Most of the past developments in horticulture in Kenya that have been supported by donor initiatives, have focused essentially on the development, supply, and marketing of horticultural produce (flowers, vegetables and fruit) for export markets in Europe, with special attention to those in the UK. Under such circumstances it has been logical for donor aid to have been channeled into initiatives designed to improve the performance of Kenyan export horticulture as a sub-sector, including support for facilities and services from production through to marketing

The new strategic objective (SO7) adopted by USAID/Kenya in its integrated strategic plan (ISP) covering 2001-2005, therefore has a profoundly different focus for initiatives in horticulture in Kenya.

The scale of the challenge for the further development of Kenyan smallholders through their involvement in the further growth and development of horticulture is nothing less than daunting however: There are more than 2.5 million smallholders in Kenya occupying some 60 percent of the 38 million hectares of land under cultivation and who contribute some 75% of the gross value of agricultural production. Women play a major role in the production of horticultural crops in Kenya with more than half of the total smallholdings cultivated almost exclusively by them.

The average size of smallholder farms is less than 2.0 hectares with 75% of the total number being below the average farm size. Many smallholder farmers, especially those in the Lower Highland Zone of the Central and Eastern Provinces, and the higher rainfall areas of the Rift Valley, are engaged in growing vegetables and some fruit, while there are also major fruit growing enterprises in the Coastal Province. Most of the production is rain-fed, as only 80,000 hectares (some 5% of the total arable land) is under irrigation – with most of this under the control of medium to large-scale farmers.

Fresh vegetables and fruit are significant components of Kenyan diets with estimations of annual per capita consumptions of vegetables alone of around 20 kilograms in rural areas and 40 kilograms in urban areas (National Development Plan 1994-1996). Irish potatoes, carrots, tomatoes, cabbage and kale are prominent among the vegetables marketed domestically. This demand is supported by more than 1.5 million tonnes of supply of vegetables per annum and over 2.0 million tonnes of fruit. This combined production represents a significant proportion of the 25% GDP contribution claimed by agriculture as a whole. This translates to something of the order of 80 billion Kenya shillings or over

US\$1.0 billion added to the domestic economy each year. Horticultural crops, especially flowers, fruit, and vegetables are also of great significance to Kenya's export economy contributing US\$270 million to the country's overall export economy of US\$1765 million [15%] in the year 2000.

Although the total volume of horticultural products exported has grown very impressively over recent decades, this proportional contribution to total exports has remained relatively constant over the past 6-8 years, as has the proportion of the total national horticultural crop that is exported. For all its potential as the often-quoted "engine of growth" for Kenya, it must be stated that horticulture itself is currently a victim of a very weak domestic economy, while also being a somewhat vulnerable contributor to the export economy.

Kenya's economy needs horticulture to develop as well as to grow just as Kenyan horticulture needs the economy to grow and develop!

Unfortunately Kenya's GDP per capita has been in negative growth territory since 1996/97, while a number of its key international trading advantages for horticultural produce are under threat, both from emerging competitors and from the changing nature of the international marketplace.

Consumers of Kenyan horticultural produce in the major importing countries are becoming increasingly discriminating, not only about the quality of the actual commodities that they purchase, but also about the 'quality' of the socio-cultural and bio-physical environmental conditions that prevail within the country of production. Issues such as the health and safety of workers in horticultural enterprises, the integrity of the bio-physical environment in which crops are grown, and maximum residue levels (MRLs) of pesticides on produce, are all of increasing importance in this regard. Thus there is an ever-increasing demand for the adoption of codes of practice that address these issues at the source, and while Kenyan horticultural exporters have been among the first to develop and adopt such codes, the pressure for further development and continual adaptation will persist.

These consumer concerns are transmitted through the supply chain through the ever-increasing demand for the adoption of quality assurance schemes and codes of practice that address these issues at source. These include generic-international standards like ISO 9000, ISO 14000, HACCP, and SA 8000, and horticulture industry-specific standards like EUREP and the MPS flower label, as well as firm-specific supermarket and PMO codes of practice. As exemplified by the FPEAK and KFC codes of practice, Kenyan horticultural exporters have been proactive in the development of industry codes of practice. Moreover, both FPEAK and KFC are key players in the COLEACP Harmonized Framework. The Harmonized Framework is the product of the harmonization of the national Codes of Practice of twelve exporters' associations in nine countries, most notably Kenya, Tanzania, Uganda, Zimbabwe, and Zambia.

However, the pressure for further development and continual adaptation will persist. Implementation and certification of the KFC and FPEAK codes of practice is not occurring as quickly as needed. On a similar note, Kenyan exporters must work much more aggressively to benchmark their codes and the COLEACP Harmonized Framework to important emerging industry codes and initiatives such as EUREP and the CIES Food Safety Initiative. One problem associated with the certification of the Kenyan industry codes of practice, as well as other codes and standards such as organic standards, is the lack of accredited and credible third party certification bodies in Kenya.

No code of practice prevails among suppliers to the domestic markets. It can be expected that with time, domestic consumers will become more discriminating in their demands for better quality, safer, and more responsibly produced fruit and vegetables, and this will place a host of new demands on the smallholder producers. While the organization of the export horticultural supply chain and the domestic market supply chain has been quite disconnected in the past, recent changes in the domestic market have led to increased synergies between the two. The recent growth of supermarkets in the domestic retail market for horticultural products coupled with increasingly discriminating consumer demands for better quality, more conveniently packaged, safer, and more responsibly produced fruit and vegetables, will lead to a more buyer-driven supply chain in the domestic market. These changes will continue to place a host of new demands on the smallholder producers.

Evidence from other countries, particularly in Central and South America, points to rapid changes in the supply chain as supermarkets emerge as important retail outlets. The early signs of this process are already apparent in the Kenyan domestic market. These include the emergence of procurement specialists (wholesaling firms) where transactions are characterized by long-term relationships and trust as well as both formal and informal contracts and the decline of the importance of the traditional wholesale market where spot market transactions dominate.

Many smallholder growers have only made the transition from subsistence activities to commercial farming enterprises over relatively recent years and this has coincided with the implementation of structural adjustments and public sector reforms by the Kenyan government. Aspects of this reform process, such as the liberalization of price and marketing systems, and government budget rationalizations, are having very direct impacts on the 'climate' of the sector. Large, vertically integrated agribusinesses that are involved in exporting horticultural produce, are nurturing entrepreneurship in the sector while also providing direct employment opportunities across a range of enterprises in which they are involved. With other exporters, they are also providing some opportunities for smallholders to engage in the export trade as outgrowers, although the major proportion of the outgrowing is contracted to growers with medium to large holdings.

The domestic market for vegetables and fruit would also seem to be growing. This provides potential benefits to incomes of rural households for smallholder producers, for

small-scale rural traders who supply inputs of goods and services to the growers, and for those who provide post-harvest and marketing services and facilities.

Increasing market demand for horticultural produce within Kenya, thus presents a range of opportunities for those who live in rural households to improve their incomes. These development dynamics are not, however, without their risks and threats. For instance horticultural husbandry practices are notorious for the destructive impacts that they can have on the bio-physical environment including perturbations of water cycles, the chemical and physical degradation of soils, and biocidal contamination of soil, water, and produce. Horticulture can also have profound socio-cultural impacts that include matters to do with the health and safety of consumer and producer alike, as well as with cultural and gender-related issues of equity and social justice.

Taken together, all of these issues lead to a picture of considerable complexity for those concerned with developments in horticulture in Kenya. And this in turn, is demanding approaches to development that differ significantly from those that have been conventionally followed across the entire ‘developing world.’ It is increasingly obvious that there is now a need for development activities to focus simultaneously on a host of interconnected issues that range from the costs of transactions across the entire value-chain to the costs of the impacts of horticultural activities on both the bio-physical and socio-cultural ‘environments.’

The proposals presented in this report by the members of the Horticultural Design Team reflect their strong commitment to the provision of a new, more systemic model of development that is entirely appropriate to the specific objective of increasing the incomes of smallholders in Kenya, through horticultural activities that are as effective and efficient in their transactions as they are minimal and responsible in their ecological and socio-ecological impacts.

The belief is that USAID/Kenya has a key role to play in this crucial endeavor and it is the logic of such an approach to development that has dictated the systemic/holistic approach that the team has taken to the project design itself. All that they have learned from the literature that they have accessed, from their reading of reports of past horticultural development initiatives in Kenya, and from the interviews that they have conducted during the period of their work in the country, has reinforced this position.

2 The Scope of Work

The program objectives for the Scope of Work of the procurement, “based on the challenges and constraints identified by stakeholders for the horticultural sector and focusing on the intermediate results (IRs) of agricultural productivity, trade, and producer organizations” were to:

- design activities and interventions,
- prioritize these, and
- provide logical groupings of activities that will lead to the realization of SO7 results.

The full Intermediate Results Framework for SO7 is illustrated in Annex One.

The approved ISP for Kenya provides the framework for implementing SO 7, increasing rural household incomes. The purpose of this procurement is to design the activities that will comprise several of the elements in the SO:

- IR 7.1 agricultural productivity

The MSU team will design a cohesive set of activities to address constraints in the horticultural sector relating to policy reforms, technology development and transfer, private sector participation, and the availability of agricultural inputs. The team will demonstrate that the proposed intervention for the following specific issues contributes directly to the intermediate result of increased productivity in the horticultural sector;

- policy
- technology development and transfer
- natural resource management

- IR 7.2 private sector delivery of services

The MSU team will propose a policy reform agenda for trade, increasing competition, improve marketing systems, and increase trade facilitation services in the horticulture sector both for improved domestic and international marketing and trade.

- increasing agricultural trade and improving agricultural market efficiencies;

- IR 7.4 improving the capacity of smallholder business organizations/producer organizations

The MSU team will propose activities to strengthen and increase smallholder organization’s abilities to provide services to their members effectively and profitably.

Based on USAID’s most recent ADS guidance, the team will:

- develop a detailed outline of all activities based on the horticultural component that would achieve results for IR 7.1, 7.2, and 7.4 with sufficient detail to show how it contributes to each of the relevant sub-IRs and the achievement of the SO7, including the identification of target groups with an estimation of their numbers.

- identify and clarify roles of other institutions that may be involved in the achieving the intermediate results.
- determine the major outputs required to achieve each of the intermediate results under each of the commodity components and propose desired results and cost effective and realistic indicators for measuring the performance for each of the activities and outputs.
- identify potential areas for integrating gender into the implementation activities and recommend how best to do it while also incorporating environmental considerations in the implementation.
- propose viable implementation mechanisms to be used to achieve results under the horticultural sub-sector, and
- develop a proposed budget for the horticultural activity that will include inputs required to achieve the outputs and results outlined in the Results Framework.

At the initial briefing with ABEO staff following their arrival in Kenya, the team was also requested by the Senior Agricultural Officer at the Mission, Margaret Brown, to present their eventual proposals across a profile of high, medium and low scenarios “to enable USAID to respond to different funding options”.

3 Methods and Procedures

As indicated in the SOW, procedurally, the team would be expected to:

- review existing relevant documents relevant to horticulture in Kenya
- access studies, analytical pieces done in preparation of the ISP, and the ISP itself, and,
- consult and hold regular review and discussion meetings with SO7 team members, selected members of the PDA offices, and various key staff of USAID partners and stakeholders in the horticultural sector in Kenya.

The investigations which led to the generation of this report, with its “Design” recommendations, were conducted over a six-week period (January 28 – March 8 2002) by a team comprising the two lead authors of the report (from Michigan State University who resided in Kenya as the two ‘permanent’ members throughout the project), five Kenyan investigators, and three other international members who were only ‘in-country’ for portions of the time. The contributions of all of the members of the team were vital to the preparation of the report.

For the duration of its work, the team collected and reviewed a very comprehensive set of published studies, both academic (Annex Two) and technical (Annex Three) that are relevant to the further development of horticulture in Kenya.

A number of reports from different agencies that have also been concerned with the development of horticulture in Kenya (including DFID, FAO, GTZ, and JICA) were also reviewed during the work period.

From the material reviewed, it is concluded that:

- In the international literature there is a very significant body of research findings generated through studies both in Kenya itself and also from elsewhere under circumstances pertinent to the situation in Kenya, that is extremely relevant to the further development of horticulture in that country, and in particular to its specific role in increasing smallholder income.
- The spectrum of issues that the research covers, embraces (a) agricultural productivity (IR 7.1), (b) private sector delivery of services (IR 7.2), and (c) improvements in the capacity of smallholder business organizations/producer organizations (IR 7.4), although rarely with such direct foci, and more commonly in an integrated manner.
- The integrated (systemic/holistic) nature of a number of the research reports, in particular those that embrace environmental, social and/or gender impact issues in addition to production and/or marketing matters, as well as those that follow supply chain approaches, provide important illustrations of the significance of such a perspective to the issue of horticultural development in Kenya.
- The matter of the accessibility of research findings of this type to people involved in horticultural development in Kenya is one that is explored later in this report with regard to a number of the interventions recommended by the team.
- These publications highlight the need for mechanisms and networks to be established within Kenya for the wide dissemination of such research findings. Furthermore, processes also need to be developed to facilitate the use of research findings such as these in the design of strategies by institutions and individuals within the country who are concerned with the further development of horticulture.

Furthermore:

- A review of the reports gathered from other development agencies, research and policy institutions, government and private sector organizations, and NGOs and CBOs, reveals the fact that a very significant range of initiatives that are relevant to the SO 7 focus on horticultural developments to improve rural incomes in Kenya, (a) have been conducted over past years, (b) are currently being conducted, and (c) are planned for introduction in the near future.
- However, it is also evident that the majority of these initiatives, with two notable and important exceptions from FAO (Farmer Field Schools) and DFID (Business Services Market Development) have been, or are being, conducted largely in isolation from each other. They also reflect models of development that encourage piecemeal rather than systemic forms of development.

- This fragmentation is mirrored in the nature of the sector itself; there is very little sense of a coherent, energetic focus for the development of Kenyan horticulture as a whole, nor indeed any great collective commitment to the livelihoods of rural smallholders.
- Finally, there is clear lack of coordination and collaboration between most of the development initiatives in agriculture/horticulture being conducted in Kenya by individual donors and international development agencies. Most regrettably, a forum that had once been active with respect to regular exchanges of information and ideas about initiatives in agriculture/ horticulture in Kenya now appears to be convened only on rare occasions.

A large number of interviews were conducted during the duration of the design project (cf Annex Four for a representative list) with each based loosely around the focus question:

‘Given your appreciation of the challenges facing producers of horticultural commodities in Kenya, what would you recommend could be done to improve rural incomes in Kenya through horticulture?’

The team was given a ‘head start’ in this regard. The USAID/Kenya Mission had incorporated into the documentation of the Scope of Work a very extensive and extremely diverse set of “specific questions to be answered” with respect to Kenyan horticulture. These were made available to the MSU team prior to its departure for Kenya. The questions were catalogued under each of the three IRs (7.1, 7.2 and 7.4), and pre-identified as relevant to the design of the horticultural program for Kenya. They had been drawn from a list of issues that had been generated at meetings with stakeholders within the Kenyan horticulture sector during 2001. These are appended to this report in Annex Five.

While of considerable relevance to the team’s activities, these questions also posed a few difficulties for the team:

1. While catalogued (after the event one suspects) into the domains of three of the four IRs of the SO 7, they are not systematic in their reflection of any particularly coherent or ‘holistic’ perspective of the horticultural sector in Kenya. As strongly emphasized in much of the literature reviewed by the design team, it is often the lack of such a perspective across the sector that is the root of many of the difficulties faced by those addressing its further development.
2. They are not comprehensive in their reflection of the issues that might need to be addressed when the sector is investigated from a ‘holistic’ or systemic perspective such as that reflected in supply-chain/market chain approaches, or those systemic development methodologies that explicitly address impact issues involving gender, the natural environment, or society at large. Given the significance of these three latter matters in particular, this is a serious omission.

3. They range from relatively simple technical questions that could be answered in a relatively short period, through to very complex organizational and policy matters that could only sensibly be addressed through major research studies extending over several years. Prioritization as foci for USAID interventions under such circumstances proved exceptionally difficult, especially in the absence of a systemic framework.
4. They are concentrated almost exclusively on *constraints* to the sector rather than on also identifying and expanding upon the past and present *strengths* of Kenyan horticulture, and potential *opportunities* (as well as *threats*) that the future might conceivably bring.

That said, the questions/issues raised did lead to the emergence of a series of significant ‘higher-order’ (meta-institutional) issues that have provided a very important context for the work of the design team.

Thus:

Given that the agriculture/horticulture sector in Kenya is supported by a significant number of formal institutions, many of which have been in existence for a considerable period of time, why were there no answers already available to many of the questions raised by the stakeholders?

For instance:

- Why had the questions about policy and the nature of the policy environment related to horticultural matters not already been addressed by institutions such as Tegemeo, the Institute for Policy Analysis Research (IPAR), or the Kenyan Institute of Public Policy Analysis (KIPPRA), or by authorities within respective ministries and government departments themselves?
- Why had the questions about costs of inputs and marketing, including freight, not already been addressed by the social and economic branch of the Kenya Agricultural Research Institute (KARI), or economic analysts within the Ministry of Agriculture and Rural Development (MoARD), Tegemeo, or academic researchers within the three universities in Kenya with horticultural faculty, or by the Horticultural Crops Development Authority (HCDA), or the Fresh Produce Exporters Association of Kenya (FPEAK), or the various input providers for that matter?
- Why had the questions about technical production matters including optimal levels of various inputs, appropriate technologies, and specific pest management issues not already been addressed by KARI and other professionals within the Ministry of Agriculture and Rural Development, or within international centers present in Kenya such as ICRISAT, and ICIPE?
- Why had the questions about water usage and availability not already been addressed within the Kenya Water Institute (KEWI) or the Irrigation and Drainage Branch (IDB), or District or Provincial Irrigation Units (DIU;PIU), or

the Water Development Department (WDD), or the Ministry of Water Resources (MWR)?

- Why had the questions about training not already been addressed by those who were heavily engaged as providers, such as the Farmer Training Centers of the Ministry of Agriculture and Rural Development, KARI, the legion of NGOs, CBOs, and international development agencies operating in Kenya, the universities in the country, HCDA, FPEAK, KFC or exporting companies themselves?

Is it that the questions have indeed not been asked before, or the issues even addressed before, or is it that there are indeed already answers to many of the questions that have been raised, but that such answers have not been made accessible by those in the institutions concerned or accessed by those posing the questions?

And what about alternative sources of information such as the host of study reports that must lie within the international agencies and consulting firms and banks and NGOs and CBOs that have been actively engaged in horticultural initiatives over many years in Kenya? Or the research literature referred to earlier? How relevant and accessible are these?

It is important to ask where the current critical ‘bottlenecks’ or constraints are in the institutional generation and/or dissemination of knowledge relevant to horticulture in Kenya, and what future threats to current operations might be foreseen. It is equally important however to also explore strengths and opportunities for the ‘knowledge system’ in Kenya with respect to horticulture both in the present and in the future.

Future strategies are as vital as present operations. An undue emphasis on the operational constraints of today can often represent serious distractions to the development of sustainable strategies for tomorrow.

These matters are of very considerable importance, for they address what might be referred to as meta-institutional dimensions of development.

A second, and equally important issue here relates to the influence that particular perspectives on the further development of horticulture in Kenya have on knowledge generated and disseminated about it.

An investigation conducted from an export perspective for instance, will generate quite a different set of relevant knowledge (hence questions and answers) from a perspective oriented towards domestic issues. Similarly a study based on a central concern for the development of the horticulture sector *per se* will yield quite different concerns and knowledge from a perspective that has the role of horticultural crops in improving the income of smallholders as its primary focus. The same of course is true for the difference between a focus on operational matters today versus strategic matters for tomorrow. As a final example, and one that has considerable relevance to the present design task, the knowledge generated from an investigation that assumes a systemic or

holistic perspective will focus on issues that are quite different from those which are of primary concern from only a technical or marketing perspective.

This matter of perspective was one that the design team had to face soon after its arrival in Kenya when it was given two related reports (Feldt, 2001; Horticultural Task Force 2001) about the further development of horticulture in Kenya, that had recently been completed (and to which a third (Action for Enterprise, 2001) was later added). Each of the three reports contained a set of recommendations that reflected the export-oriented perspective on horticulture that had been adopted by their respective authors. Furthermore, while at least two of the reports had explicitly adopted perspectives that were partially integrated, none of the three was essentially systemic in its comprehensiveness or coherence.

A strong focus on training and on the development of farmer organizations characterized all three, although these too, were somewhat fragmented in each report. It is of interest to note in this regard that from reports received during the work period, the team calculated that the number of Kenyan farmers being trained in any one year, through a wide variety of different initiatives, probably exceeds 10,000. Such efforts are however, hopelessly un-coordinated.

4 Methodology

As foreshadowed in the response by MSU to the cost proposal request from USAID/Kenya, the design team explicitly adopted an approach to the scope of work that reflected a synthesis of both value-chain and systemic development perspectives. This reflected a perspective (or paradigm) on development that was shared across the membership of the team that is consistent with much of the contemporary literature on horticultural/ agricultural development.

The schema that was used as the basis of both the conceptual and analytical frameworks for the work done during this design project is illustrated in Figure 1 overleaf. It reflects the 'systemic' integration of a value-chain analysis of horticulture in Kenya with a formal systemic analysis that includes investigations into aspects of the socio-cultural and bio-physical environments in which horticulture is practiced from the perspectives both of its resource base and its impact environment. The schema is used to guide investigations at a number of different levels of organization from macro analysis of the whole sector down to very local micro-levels of specificity. A variation of the schema that was used in the present work that illustrates the significance of dis-aggregation across different levels of organization, is appended in Annex 6.

During the present design activities, assessments were made of Kenyan horticulture with respect to:

- The strengths and weaknesses as currently perceived across a wide spectrum of organizational levels (a) within each individual component of the value chain, (b) of the relationships between each component in that chain, and (c) of meta-institutional influences on all of the above.

- The strengths and weaknesses as currently perceived with respect to the socio-cultural and bio-physical foundations of horticulture across a wide spectrum of organizational levels.
- Estimates of future opportunities and threats across a wide spectrum of organizational levels that could be associated with socio-cultural and bio-physical foundations of horticulture.
- Identification of a range of potential desirable and feasible improvements across the value chain, as “actions for change”, drawn from the above analyses.
- Estimations of the potential impacts (both positive and negative) of mooted ‘actions for change’ on the socio-cultural environment (including issues of social justice, equity etc and especially those that might be gender-related) and/or bio-physical environments (including soil erosion, chemical pollution, water depletion etc) that mooted ‘actions for change’ might have).
- Estimates of future opportunities and threats (a) within each individual component of the value chain, (b) of the relationships between each component in that chain, and (c) of meta-institutional influences on all of the above.

The inclusion of this ‘actions for change’ dimension adds a vital *development* dimension to the *analytical* framework.

It is important to emphasize that this is a conceptual framework for guiding learning and not a template of systematic activities.

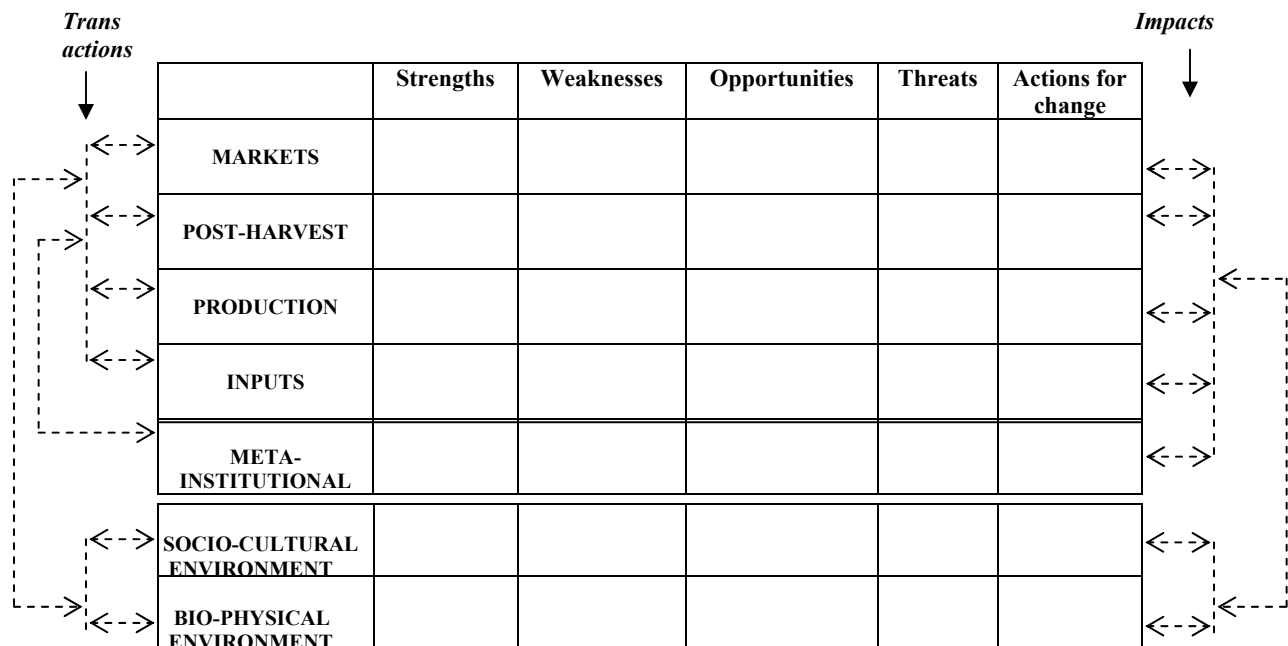


Figure 1: The ‘systemic development’ framework used in the Kenya Horticulture Design project

In essence then, the matrix provides a framework for guiding any process of ‘systemic development’. Indeed, in adopting this integrating framework for their own work, the

members of the team intentionally illustrated the very approach to ‘systemic analysis and development’ that they now recommend as the centerpiece of their design. By approaching the task of investigating the actual and potential roles of horticulture in increasing rural household incomes in Kenya through “learning about the systemic nature of horticulture in Kenya”, they were ‘walking their own talk’, so to speak.

Each individual member of the design team was delegated to focus on investigating issues within one particular domain within the total horticultural supply chain in Kenya, as conceptualized by the team as a whole. Furthermore, in exploring issues related to the allocated domain, he or she was also required to explore linkages between that domain and the others, as well as ecological and gender/socio—cultural impacts of actual and potential activities in the particular domain under review.

The objective of such analyses was to provide sufficient understanding of (a) the whole chain and its component domains, (b) the overall market and its disaggregated components, and (c) both vertical and horizontal relationships across the entire matrix extended to include socio-cultural/gender and ecological foundations and impacts.

The use of such an analytical perspective facilitated the expression of some of the key dynamics of the interrelationships between the overall state of the Kenyan economy and some of the gender and ecological impacts associated with horticultural development in such a climate. It also emphasizes the vital significance of a learning approach to development.

The following scenario reflects the complexity of the matter.

Reversed Urban Migration

With the economy in recession, many Kenyans now find themselves unemployed. Some return to the rural areas from whence they came, and take up smallholder farming. To do so however, they can only gain access to land through the further division of an already fragmented family holding – atomizing the land even more into non-economically sized units. The returnees decide to cultivate vegetables and attempt to sell these for the best price possible. They hear of a scheme of ‘outgrowing’, through which they might gain access at least to sophisticated urban markets back in Nairobi, if not to export markets in Europe. They are successful in attracting an informal contract with a trader, who provides them with some seed and detailed descriptions of the husbandry practices and inputs that will be needed to produce a satisfactory crop. These inputs are expensive, draining the meager savings of the returnees, and the husbandry practices are difficult for those who only have rudimentary farming skills. No one else in the immediate locality has ever grown such vegetables before, and so the technical knowledge needed by the returnees is just not available. The crop is beset by pest problems, poor growth, and lack of water. The trader refuses to buy the eventual harvest as it is of very poor quality. The smallholder goes to the forest to cut and process wood for charcoal to sell at the roadside in order to generate at least some income.

Multiplied on a sufficient scale, such activities all too soon result in severe deforestation. This in turn leads to devastating soil erosion on the smallholding through runoff following rain, and this reduces the quality and integrity of the resource base of the smallholding even further. The water runoff carries with it not only the topsoil but also traces of pesticide that reside in that soil following its application in the production of the (failed) crop. These polluted waters are carried downstream where they are drawn and used for drinking by families in rural villages without piped water supplies. Sickness results, and this adds further to the burdens of women who now, in addition to their many other responsibilities, must nurse their sick children.

Without changes, this situation can only worsen.

This is not an improbable tale when “development” is done without an appreciation of the complexity of social, economic, and ecological interrelationships. The World Bank is among those international institutions that now make explicit, an embrace of all three domains, and such interrelationships that exist between them. In this vein, the new Environment Strategy from the Bank emphasizes three interrelated objectives in pursuing its core goal of lasting poverty alleviation:

- Improving the quality of life of people (*social*),
- Improving the prospects for economic growth (*economic*), and
- Protecting the quality of the regional and global ‘commons’ (*ecological*)

A similar logic pertains to the lack of appreciation that so often exists of the interrelationships between production supply and market demand – even by experienced smallholders. And this applies to a host of other interrelationships too, especially in times of such transitions as those from subsistence farming to commercial growing, and from public sector subsidized markets, or centrally planned and supported ones, to liberalized market situations. The lack of ‘systemic’ appreciation under these circumstances often leads to severe disadvantage, if not crisis.

The challenge is not just to integrate contributions from different disciplines into a multidisciplinary or interdisciplinary approach to development but to actually transcend disciplines in the first instance, and at other times throughout the life of initiatives, to explore the situation in all of its ‘wholeness’. It is vital to emphasize that such ‘big picture’ (*systemic*) thinking must be practiced, at least to some extent, by all of those who have a stake in any development initiative and who will be participants in the process or will be affected in one way or another, by any changes that it might bring – in terms of socio-cultural (including gender-related) impacts, economic impacts, and ecological impacts.

5 Logic of the Proposal

The essence of the recommended design is the introduction by USAID/Kenya of a program of development that reflects a significant shift in process that is entirely

consistent with the new emphasis of the Mission on the specific objective of increasing rural household incomes (SO 7). This fresh ‘systemic’ approach to development reflects shifts in emphasis from conventional approaches to development in a number of key aspects. Thus, for instance, the key focus of development changes:

- *from intervention to investment*
- *from sector growth to smallholder well-being*
- *from superimposition to participation*
- *from infrastructure to human development (capacity building)*
- *from fragmentation (reductionism) to systemic integration (holism)*
- *from training to learning*
- *from groups in isolation to active networks*
- *from dependency on agencies to interdependency with them*
- *from regulation to facilitation*
- *from ‘productionism’ to ‘sustainabilism’*
- *from single objective to multiple objectives*

In reflecting many of these vital shifts in focus, the conceptual framework which guided the activities of the design team itself (Figure One, page 21) is regarded as entirely appropriate as a framework for the proposed designs that follow.

It is proposed that USAID/Kenya establish a systemic development program that will be conducted simultaneously in a number of different ‘districts’ in different AEZs in Kenya that are appropriate to horticultural production.

The design that follows envisages one core or centerpiece activity along with five key ancillary component activities that are complementary to its achievement, and illustrative of the type of activities that the program would encourage. It is the core activity that provides both the context and organizational framework for the proposed key ancillary initiatives.

The actual number of ‘districts’ engaged in the core activity will vary with the level of funding. It is envisaged that under a scenario of low funding support, three ‘districts’ would be involved in the program, with this number being extended to five under a scenario of medium level funding and to seven under a high level of funding scenario.

It is important to emphasize that a number of initiatives currently being pursued in Kenya by other donors and agencies are very congruent in both approach and operations to what is being proposed here. There would, therefore, be many advantages in liaising closely with DFID, FAO, GTZ, SIDA and JICA in particular, as well as with key NGOs and CBOs, plus a number of GoK agencies including the Ministry of Agriculture and Rural Development, KARI, and the Horticultural Crop Development Authority, in the further planning and execution of the initiatives outlined here.

It makes obvious sense for the proposed activities to be conducted within a spirit of cooperation with other national and international institutions and in a manner that seeks and fosters collaborating partnerships wherever possible.

The USAID/Kenya Mission should do all that it can to further encourage liaison and networking between national and international development agencies and donors. In this regard, the Mission might consider organizing a strategic workshop on Systemic Development to which representatives of some of the other agencies mentioned above might be invited. This could be seen as an initiative within the broader context of systemic development itself – in this case with a meta-institutional focus.

Finally there is the vital issue of the sustainability of the initiative after the end of the program. Every attempt should be made during the program's duration, to support the establishment of a Center for Systemic Development at one of the institutions of higher education in Kenya. This would include the professional development of appropriately qualified academics through institutional partnerships with an American university. In this manner, the fundamental principles and practices of systemic development can be institutionalized, and their further development as academic endeavors, strengthened. It is envisaged that a separate source of funding will be necessary for this.

6 Activity Approval Documentation

I. Summary of Core Design Activity

It is recommended that USAID Kenya establish a Systemic Development Program in Horticulture (SDPH) with a clear and unambiguous focus on improving the income of rural households in Kenya through horticulture. The following sections describe the steps needed to establish the organization and managerial framework of the overall SDPH. Five specific, key ancillary activities of the SDPH are then outlined as activities illustrative of the approach. These include consumer research, consumer education and awareness, agribusiness linkages, business services, and farmer field schools.

A. Strategic Objective (SO) 7 and Results Framework (RF)

USAID Kenya, in adopting a revised SO 7 focus on improving rural household incomes through horticulture, has foreshadowed a significant shift in its support for horticultural development in Kenya.

B. New Activity and Linkages to SO and RF

The SDPH and its five core activities address all four IRs and many of the sub-IRs.

II. Development and Description of New Activity: Establishment of the SDPH

A. Past Strategy and Interventions

Many different donors and development agencies have been involved in horticultural initiatives in Kenya over many years. Some of these initiatives have been very substantial with commitments running into many millions of dollars. USAID has been an active player in the sector, and has been particularly involved in capacity-building in research and marketing aspects, especially with regard to the growth and development of export markets for Kenyan horticultural products. Many NGOs and CBOs continue to be active in the sector, while JICA, GTZ and DFID are also currently supporting major initiatives.

Most of these projects follow an approach that starts with an analysis and prioritization of the constraints faced by small horticultural producers, the identification of those goods and services that are required by small farmers to resolve those constraints, the design of one or more delivery mechanisms to get those goods and services into the hands of the target groups, and the supply of the intended goods and services through the specified delivery mechanisms.

Several significant problems arise from this approach:

- It is generally based on linear thinking, i.e., a certain ‘blockage’ or constraint, for instance lack of cold storage facilities, is identified and addressed. The logic is that once this ‘blockage’ is addressed then the problems will be solved. However, this logic ignores the interconnectedness of the horticulture supply chain.
- It assumes that an optimum package of goods and services can be identified, in the form of a number of project ‘components’, and that an optimum combination of those goods and services can also be established, in the form of the budget allocated to each

component. In the case of market-oriented horticulture, such assumptions are difficult to sustain because it is a highly dynamic activity with rapidly changing requirements over time. Hence, there is really no such thing as an ‘optimum’ combination of goods and services that can be designed *ex ante*.

- It assumes a homogeneous demand, or at least much more homogeneous than that which is confronted in everyday ‘reality’. Pre-designed ‘optimum’ combinations of goods and services can never accommodate all the possible variations across the full range of potential clients.
- By concentrating on the actual delivery of a set combination of goods and services, these projects often are forced to dedicate less attention to developing sustainable *markets* for such goods and services, i.e., to strengthening the demand and the supply sides of such markets to the extent that they can grow to the point of being able to function in the absence of external subsidies.
- Few if any considerations are allowed for any socio-cultural or bio-physical environmental impacts that might be associated with interventions.

B. Problems of Today and Possible Responses

While Kenya continues to enjoy considerable success as an exporter of both high value (flowers) and high volume (fruit and vegetable) horticultural products, fewer than 2% of the nation’s smallholders are directly engaged as outgrowers in that sub-sector. Furthermore, over recent years there has been a reduction even in that number as the exporters have had to meet increasingly rigorous quality grades and standards set by retailers in the major markets in Europe, and especially in the UK. Moreover, increasing consumer concern for ecological and socio-cultural impacts of horticultural production in producing countries creates further challenges for Kenyan growers. Competition from other exporting countries is also increasing.

A significant number of rural households benefit through salaries and wages earned by working within the sub-sector and/or by providing essential services at various points in the value chain. However, that still leaves out the vast majority of smallholders who are unaffected by the export trade in Kenyan horticulture. They must rely on being able to sell their produce in markets that range from discriminating institutions including tourist resorts, hospitals, schools, supermarkets, and a spectrum of other markets that range from central urban markets through peri-urban and rural markets, to local assemblies and even the farm gate.

Their situation is characterized all-too-often by poor market information, high transaction costs and the high cost of inputs. They also face increasing criticism about the impacts of their practices on the ecology and their socio-cultural environment where gender issues are especially significant.

The fundamental challenge here is the need for what amounts to a cultural transformation, as previously production-oriented subsistence smallholder farmers face the need to become market-oriented, ethical and environmentally responsible enterprise managers!

A key aspect of such a transformation is the capacity and willingness of rural householders to organize themselves into effective groups that are themselves active 'nodes' within a range of different networks. According to the government of Kenya (GoK) and NGO sources, virtually all rural households are members of at least one community-based organization (CBO). The Department of Social Services estimates there are up to 10,000 registered self-help groups per District, of which between one-fourth and one-third are active. Compared to many other developing countries, the degree of participation in CBOs is a tremendous asset of Kenyan rural society.

In the domain of horticulture, these CBOs:

- Provide platforms for farmer experimentation and for the dissemination of agricultural technologies.
- Facilitate access to agricultural inputs, equipments, and services.
- Manage irrigation systems.
- Are vital links in the distribution and marketing systems, significantly reducing operational and transaction costs, and facilitating the flow of market information both upwards and downwards.
- Provide fora for the discussion, comparison and analysis among farmers of different production, management and marketing options.
- Link individual farmers and villages with a wide network of agencies and organizations, including the agricultural research and extension systems, NGOs, development projects, private sector firms and corporations, and local government agencies.
- Represent opportunities for collective action and coalition development.

However, most of these CBOs have great difficulties in dealing with constraints and opportunities that involve decision-making at a level higher than the local, as is the case with many of the key issues of horticulture in Kenya. These issues include increasing scarcity of water for irrigation, efficiency of the input supply systems, availability of technologies to respond to new market grades and standards (e.g., MRLs), institutions and market intelligence to improve the efficiency of marketing and distribution systems, and financing of farm and off-farm investments.

This difficulty in dealing with external issues is the result of weak or non-existent institutions and networks that can link innovation at the local level with agents, processes, incentives and assets located at the regional, national or international levels. The old or conventional model that was supposed to play this bridging role in agricultural innovation in Kenya (the linear, top-down and supply-driven research-extension-production scheme) is basically defunct and has not been replaced by any viable alternative. Therefore, the CBOs represent a prime leverage or amplification point to facilitate development across the entire horticulture 'system'.

C. New Activity: Establishment of the Systemic Development Program in Horticulture (SDPH)

1. Description of Activity Components, Target Groups and Linkages to SO and RF

1.1 Activity Components

As emphasized earlier, the proposed design for USAID Kenya's SO 7 initiative in horticulture is based on the argument that conventional approaches to development are inadequate in the face of the complexities now faced by smallholders who wish to improve their incomes through the production and marketing of horticultural crops.

The key element of the SDPH is the flexibility to deal with localized and emerging problems and to take advantage of emerging opportunities. However, a flexible program requires strong management capabilities in order to be successful. Thus, the SDPH must have a strong management team which is envisaged here as comprising a program manager and a number of district facilitators (3, 5 or 7 as functions of budget support levels).

The prime component of this new activity is the appointment, further education, and establishment, of a number of enterprising, well-educated, enthusiastic and talented 'systemic development' professionals. An overall program manager with a similar profile will also need to be appointed with additional competencies and experience in management. The program manager will be located in Nairobi. The others will be district development facilitators who, as their title suggests, will be located in three or more different districts within the country where horticultural crops are currently grown or there is potential for them to be grown.

The use of the term 'district' here is to designate several different networks of farmer groups and does not necessarily coincide with the GoK's administrative districts. Indeed, given the particular ecological sensitivity of horticultural practices, there is much to be said for adopting already identified Catchment Management Areas (CMA) as 'districts'. The actual site locations designated for the program will need to be chosen by the SDPH implementing organization in close consultation both with the USAID/Kenya Mission and other key national agencies -- especially the Ministry of Agriculture and Rural Development, HCDA, and KARI. The catchment management option automatically sets up the program to logically deal with environmental issues and potentially circumvents future problems as well as avoiding the political connotations of using existing GoK administrative districts. The number of 'district' development facilitators appointed, and thus number of 'districts' involved in the initiative, will be a function of the level of funding available.

The essential role of the district facilitators will be to:

- Select up to 12 groups of some 30 smallholders each to agree to participate in initial stages of the development program. (There will be a turn-over of such groups as the program progresses. While this is difficult to establish the rate of

group at this point, it will certainly be at least once over two years. There will be natural attrition as well as differential development rates across groups).

- Help the groups maintain themselves, and to facilitate their learning about the foundations of systemic development and develop practices ‘across the value chain’ appropriate to their effective involvement in it.
- Facilitate bi-monthly meetings of each group through which the farmers are exposed to a value chain/systemic perspective as the framework for learning from their everyday experiences about how to improve their performance across the whole chain.
- Liaise with appropriate providers of technical and financial services such as KARI, HCDA, the Ministry of Agriculture and Rural Development, NGOs and CBOs, and educational institutions including elementary and grade schools in the various districts, and enable access by the smallholder groups to services on an ‘as needed’ ‘user pays’ basis.
- Facilitate the development of networks appropriate to the emergent needs of the smallholder groups.
- Facilitate the Agribusiness Linkage, Business Service, and Farmer Field Schools initiatives
- Assist with the overall management of the program as a member of the Management Team.

The program manager will be responsible for the coordination and strategic management of the entire project, which will include all of the various ancillary design activities proposed in this document. He or she will also be responsible for the overall budget and financial management of the program. The program manager will also be responsible for promulgating the model of systemic development in appropriate forums across the country and networking with those involved with similar schemes elsewhere in the world. Accessing academic and technical reports such as those identified in the present study, and the dissemination of this and other research findings to the smallholder groups through the agency of district facilitators, will be a further vital responsibility of the program manager.

1.2 Target Groups

The core element of this activity is the ‘district’ networks of farmer groups. Thus, the direct target groups of this initiative are self-forming and self-organizing groups of smallholder farmers (CBOs) who are willing to participate in a process of personal and collective development that demands of them significant commitment as learners, networkers and collaborators.

Since this activity is based on a systemic approach, other actors in the supply chain will also benefit, both directly and indirectly, from this activity due to the interconnectedness of the horticultural value chain. Among these other beneficiaries are the suppliers of agricultural inputs and services, traders, transporters, buyers of all types, retailers, and consumers.

1.3 Linkages to SO and RF

The new activity is essentially the introduction of a new approach to development that focuses on particular ‘learning’ groups of smallholders in Kenya being able to increase their incomes through an increased knowledge of the entire value chain in which they are involved, and where they may become significantly more productive (IR 7.1) and enterprising (7.2). The proposed initiative also places a very strong emphasis on their socio-ecological responsibilities (7.1.3) while encouraging them to act collectively in many different aspects of the developmental initiatives that they are taking (IR 7.4).

It can be predicted that as their enterprises become more profitable through their participation in the program, they will seek new technologies appropriate to their emerging needs (7.1.4). As the district in which they operate also begins to benefit from the increased economic activities, so there will be no doubt that MSMEs will begin to develop (7.2.3) so further increasing rural household incomes.

1 Possible Levels of Effort, Illustrative Budgets and Timeframes

There are a number of sub-activities that are crucial to the establishment of the program.

- Professional and support staff need to be recruited
- Districts need to be selected, offices need to be established in them as well as at HQ, and linkages must be established with existing development initiatives.
- The educational orientation to systemic development for the ‘members of the management team’ needs to be designed and conducted.
- Capital equipment needs to be purchased.
- Smallholder groups (CBOs) need to be established.

Below are gross estimations (US\$) of direct ‘in country’ costs (minus contractor costs) to support the Core Activity at a low level of funding support (1 program manager + 3 district facilitators).

	Year One	Year Two	Year Three	Year Four	Year Five	TOTAL
Professional Salaries + Benefits	170,000	175,000	185,000	193,000	210,000	933,000
Support Salaries + Benefits	20,000	22,500	24,000	26,000	28,000	120,500
Non-salary costs	100,000	104,000	106,000	108,000	110,000	528,000
Professional Development	90,000	40,000	40,000	40,000	40,000	250,000
Capital Equipment	140,000	-	-	-	-	140,000
TOTAL	520,000	341,500	355,000	367,000	388,000	1,971,500

3 Envisioned Methods of Implementation and Participating Institutions

Two organizational models suggest themselves for the implementation of the SDPH. The structure of each model is dependent, in part on the level of funding, but also on key ‘political’ considerations with respect to the relationships between the project and key

GoK institutions such as the Extension Service, HCDA, and KARI. Low, medium, and high budget scenarios based on the number of districts included in the model can be outlined for each.

In both models 1 and 2, an SDPH office is established in Nairobi and managed by the program manager. The difference between the two models is the affiliation of the district facilitators and how the district offices are established.

Model 1.

The district facilitators could be drawn from the ranks of HCDA or the Ministry of Agriculture and Rural Development and seconded to the project while operating out of the Ministry's District Extension Offices. This would have the marked advantage of strengthening the capacity of key institutions in horticulture in Kenya. The disadvantages would include the dangers of "institutional influence."

The number of district development facilitators appointed, and thus number of districts involved in the initiative, will be a function of the level of funding available.

- Low level funding scenario: 3 district facilitators appointed
- Medium level funding scenario: 5 district facilitators appointed
- High level funding scenario: 7 district facilitators appointed

Model 2.

The district facilitators would be employees of an independent SDPH organization for the duration of the program. In this scenario there is the option of establishing independent offices in each district or negotiating an agreement for the facilitators to operate out of the district offices of the Extension Service or HCDA. Of course, there are advantages and disadvantages of each scenario.

The same three budget scenarios also apply to this model.

- Low level funding scenario: 3 district facilitators appointed
- Medium level funding scenario: 5 district facilitators appointed
- High level funding scenario: 7 district facilitators appointed

The SDPH headquarters and the district offices will have to be established, staffed, and maintained. This includes the cost of capital equipment including vehicles, computers and other office equipment acquired, and operating costs for the duration of the project.

Within one month of their appointment, all of the appointed professional staff (program manager and district facilitators) will attend the first part of the four-month intensive professional development educational course in Systemic Development that will include segments on systemic development, value chain analysis and application, ecological and socio-ecological impact studies, social learning, group dynamics, and facilitation. It will also include the preparation of 'learning modules' to be used by the facilitators in their field duties. Opportunities will be taken to establish linkages with as many other key

players in horticultural and rural business enterprises as possible during this time including development institutions, education, research and extension institutions, and local government agencies. The initial professional development educational experience will be conducted in Kenya, and it will be further reinforced and supported over the following months and then subsequent years of the program, by a series of other workshops, seminars and 'learning packages, that, altogether could aggregate to a Certificate in Systemic Development if the contracting agency can arrange this with an appropriate institution of higher education.

USAID Kenya will also need to select an implementing institution for the SDPH. There are several choices including development and management consulting companies and universities with development project management experience. There are advantages and disadvantages with both choices. The implementing institution will then select and establish the program management team after decisions are made about the organizational model to be adopted. The orientation education experience will be designed and conducted by the successful tenderer. It is envisaged that professionals from a range of agencies, public sector institutions, and private organizations will be drawn upon during both the educational orientation period and during the conduct of the program itself.

2 Performance Monitoring: Anticipated Performance Targets, Indicators and Baseline Information

The essential performance criterion of course, will be increased smallholder incomes in the target districts. Tegemeo or some other organization with similar capacity should be commissioned to establish baseline information on household incomes in the selected districts, and the performance of the smallholder groups in terms of livelihood improvements, monitored annually. In order to monitor the progress of learning of different program participants, other qualitative measures and process indicators should be designed during the initial planning period.

D. Summary of Analyses Supporting New Activity

It is important to emphasize here that by its very nature, systemic development embraces economic, socio-cultural, and environmental concerns. This is a key reason behind the strong support that is being given in this design to the need for fresh approaches and processes to be adopted in the cause of the further development of horticulture in Kenya. The present study confirmed an impression given in the literature, that these issues are currently poorly integrated within the horticultural sector in Kenya. The methodology of the work was firmly grounded in both the analysis and synthesis of economic, technical, institutional, financial, socio-cultural and ecological matters relating to horticulture in Kenya. Furthermore it was such methodological considerations that led to the eventual recommendation for the adoption of a systemic development program where accommodation of the multiple factors of concern and of their integration, is central to the entire design.

1. Economic

As is reported in the Integrated Strategic Plan of USAID/Kenya Mission “*Some 80 percent of the Kenyan population lives in rural areas, and 75 percent are somehow involved in agriculture. Kenya’s economy is therefore heavily dependent on its agricultural productivity. Over the past decade, however, agricultural productivity has declined and poverty has increased.While poverty is found in both urban and rural areas, 75 percent of the poor are in rural areas. USAID/Kenya will therefore focus on increasing the incomes of rural households in selected high and medium potential and arid and semi arid lands, most of which already rely on a combination of on- and off-farm activities....The Mission’s new strategy for agriculture and enterprise development [Strategic Objective 7 – Increased rural household incomes] continues to focus on rural-based economic growth as the basis for addressing Kenya’s poverty*” (USAID/Kenya 2000).

The production and marketing of horticulture crops represents a very important focus within this overall strategy. The average size of smallholder farms is less than 2.0 hectares with 75% of the total number being below the average farm size. Many smallholder farmers, especially those in the Lower Highland Zone of the Central and Eastern Provinces, and the higher rainfall areas of the Rift Valley, are engaged in growing vegetables and some fruit, while there are also major fruit growing enterprises in the Coastal Province. Most of the production is rain-fed, as only 80,000 hectares of land (some 5% of the total arable land) is under irrigation – with most of this under the control of medium to large-scale farmers.

Fruit and vegetable production represents a significant proportion of agriculture’s portion of GDP (25 percent). This translates to 80 billion Kenya shillings or over US\$1.0 billion added to the domestic economy each year. Horticultural crops, especially flowers, fruit, and vegetables are also of great significance to Kenya’s export economy contributing US\$270 million to the country’s overall export economy of US\$1765 million (15 percent) in the year 2000.

Although the total volume of horticultural products exported has grown very impressively over recent decades, this proportional contribution to total exports has remained relatively constant over the past 6-8 years, as has the proportion of the total national horticultural crop that is exported. Moreover, a number of Kenya’s key international trading advantages for horticultural produce are under threat, both from emerging competitors and from the changing nature of the international market place. Several important trends are of note:

- *Changing nature of consumer demand.* Consumers of Kenyan horticultural produce in the major importing countries are becoming increasingly discriminating, not only about the quality of the actual commodities that they purchase, but also about the ‘quality’ of the social and environmental conditions in which it was produced.
- *Increasing importance of quality assurance schemes.* Consumer concerns are transmitted through the supply chain through the ever-increasing demand for the adoption of quality assurance schemes and codes of practice that address these issues at source. These include generic-international standards like ISO 9000, ISO 14000,

HACCP, and SA 8000 and horticulture industry-specific standards like EUREP and the MPS flower label, as well as firm-specific supermarket and PMO codes of practice. As exemplified by the FPEAK and KFC codes of practice, Kenyan horticultural exporters have been proactive in the development of industry codes of practice. Moreover, both FPEAK and KFC are key players in the COLEACP Harmonized Framework. The Harmonized Framework is the product of the harmonization of the national Codes of Practice of twelve exporters' associations in nine countries, most notably Kenya, Tanzania, Uganda, Zimbabwe, and Zambia.

- *Slow implementation of the KFC and FPEAK Codes of Practice.* Implementation and certification of the KFC and FPEAK codes of practice is not occurring as quickly as needed. On a similar note, Kenyan exporters must work much more aggressively to benchmark their codes or the COLEACP Harmonized Framework to important emerging industry codes and initiatives such as EUREP and the CIES Food Safety Initiative. One problem associated with the certification of the Kenyan industry codes of practice, as well as other codes and standards such as organic standards, is the lack of accredited and credible third party certification bodies in Kenya.

While the organization of the export horticultural supply chain and the domestic market supply chain has been quiet disconnected in the past, recent changes in the domestic market have lead to increased synergies between the two. The growth of supermarkets in the domestic retail market for horticultural products coupled with increasingly discriminating consumer demands for better quality, more conveniently packaged, safer, and more responsibly produced fruit and vegetables, will lead to a more buyer-driven supply chain in the domestic market. These changes will continue to place a host of new demands on the smallholder producers.

Evidence from other countries, particularly in Central and South America, points to rapid changes in the supply chain as supermarkets emerge as important retail outlets. The early signs of this process are already apparent in the Kenyan domestic market. These include the emergence of procurement specialists firms (wholesaling firms) where transactions are characterized by long-term relationships and trust as well as both formal and informal contracts and the decline of the importance of the traditional wholesale market where spot market transactions dominate.

2. Technical

Considerable technical strengths are found throughout the horticulture value chain in Kenya with significant opportunities existing for further development in a variety of ways that would benefit smallholders. There is considerable scope for technical improvements in input supplies, production practices, post harvest handling and processing, and marketing. A major weakness of the present situation is the lack of emphasis that has been given to smallholder horticultural production beyond the role of outgrowers in high value and high volume production and marketing for export.

3. Administrative/Institutional

Kenya has been developing facilities, services and institutions to support horticultural production and marketing over many years. The Horticultural Crops Development

Authority, for instance, has been active for more than two decades. Within the Ministry of Agriculture and Rural Development a deputy director heads a horticulture division. The interests of horticultural exporters is represented by two key institutions (FPEAK and KFC). There are horticulture faculties at three major universities and a number of vocational training centers across the country. In recent times however, the marked shift in 'ethos' towards trade liberalization, deregulation and public sector reform coupled with an economy in recession, has created somewhat of a hiatus in the sector. While research into production technologies continues to be a strength, the quality and capacity of many other services including extension and training are in significant decline. At the policy level, there is considerable dispute about the nature and intentions of a proposed Horticulture Bill.

4. Financial/Cost Benefit

As emphasized earlier, poverty is not only endemic across most of rural Kenya, but is increasing in its extent. Horticulture represents a domain where alleviation of this trend and overall situation can potentially be redressed. Of special importance is the development of domestic markets in urban and peri-urban centers as well as in rural areas. Currently there are so many inefficiencies right across the value chain that small investments focused on improvements in productivity are almost certain to result in marked benefits for the smallholder producers as well as to have amplifying effects across the whole system.

5. Social Soundness

There are a number of socio-cultural issues that are pertinent to the situation with respect to the further development of Kenyan horticulture. Not the least important of these is the prospect of improved social well-being not just to smallholders through improvements in their economic circumstances, but also to society at large through safer horticultural produce and healthier diet components. Also of significance is the fact that women play a major role in the production and micro-marketing of horticultural produce in the country. Any change in the current situation will, therefore, inevitably impact on women (Annex Seven). Finally, there are a number of crucial matters relating to equity and social justice that lie at the heart of the endeavor and that will need to be explicitly addressed as they emerge.

The underlying philosophy of the systemic development approach may be stated as the empowerment of people through learning for collective action.'

6. Environmental

The production of horticultural crops is notorious for the potential that it has to profoundly impact the bio-physical environment in which it occurs. While intensive production practices can easily result in the eventual degradation of soils and the depletion of water resources, the use of chemical biocides can lead to significant pollution of both soil and water as well as of produce. There are already signs that horticultural 'malpractices' have led to significant environmental degradation in Kenya.

And this, of course, will eventually be self-destructive, as the ‘environments’ referred to here are also the foundational resources of horticulture.

All of these issues are also pertinent to each of the key activities that are ancillary to the establishment of the SDPH and which are described below.

SDPH Key Ancillary Activity 1: Consumer Research Initiative

A. Past Strategy and Interventions

Traditional development activities have focused on supply side activities ignoring demand side issues (including effective demand (income), consumer preferences, and population patterns).

B. Problems of Today and Possible Responses

Little is known about the demand characteristics for domestic consumption of horticultural products. Anecdotal evidence suggests there is a growing middle class with concerns over product quality (particularly freshness) and safety as well as demand for convenience products. There have also been assertions that lower income consumers are concerned over food safety and the health effects of preservatives and colorants in processed food products. These trends are coupled with an important trend toward the growing market share of supermarkets. Middle and upper-middle class consumers are shifting fruit and vegetable purchasing to supermarkets due to time pressures and convenience, demand for higher quality and product safety, and concerns over personal safety in traditional market areas.

C. New Activity: Consumer Research Initiative

1. Description of Activity Components, Target Groups and Linkages to SO and RF

1.1 Activity Components

A thorough consumer study is needed to complement initiatives on the supply side. A complete study of the domestic consumer market would include the following components.

- Survey to determine quantities consumed in different types of retail outlets (supermarkets, green grocers, traditional markets, roadside markets, and kiosks).
- Consultation with market research firm on retail tracking.
- Preferences study using focus groups across different income levels.
 - Is there demand for improved quality in horticulture?
 - What are the attitudes toward food safety? Pesticides? Microbial contamination?
 - What is the level of knowledge of the nutritional value of fruits and vegetables? Are consumers concerned about nutrition?
 - What are the attitudes about packaging and convenience?
 - How do consumers evaluate value (price and quality tradeoffs)?
- Identify the best means of communication and potential partners for a promotional campaign through the survey and focus groups by asking about where people get

information about products, nutrition, health, and safety. Also, consult with a market research firm that specializes in media tracking.

- Identify best means of communication to reach target markets in a promotional campaign (high, medium, and low incomes and age groups).

1.2 Target Groups

The research findings can be used in two ways:

- Consumer education and promotion campaigns to promote increased consumption of fruits and vegetables. These campaigns can focus on a variety of messages including nutritional education, food safety, as well as more commercial aspects like ‘buy Kenyan products.’
- The information can be analyzed and packaged in order for farmer groups to produce products with the attributes that consumers want. The market intelligence can be transmitted through the agribusiness linkages initiative described in the SDPH core activity 3.

1.3 Linkages to SO and RF

This initiative fits into the SO7 results framework under

- IR 7.2 Increased horticultural trade

The horticultural marketing system will be improved by this initiative (IR 7.2.2) because the research will allow producers to respond to the preferences and needs of domestic consumers. A good study of consumer preferences is a necessary starting point for developing a market oriented system of production for the domestic horticulture market (IR 7.4).

2. Envisioned Methods of Implementation and Participating Institutions

There are several consumer research firms in Nairobi that are capable of conducting this type of research. The two best firms, Consumer Insight and Consumer Research International, have conducted similar research for both multinational and Kenyan firms including Barclays Bank, Land-o-Lakes, and Unilever. Consumer Insight is well known for media tracking and field surveys. Consumer Research International is well known for retail tracking and is considered the distribution expert. It is important to use a professional research firm in order to get reliable data that is packaged in a way that can be used in potential producer-oriented activities in the domestic horticulture market.

It is recommended that the program manager consider proposals from at least two or three firms. A decision can then be made based on cost competitiveness as well as an assessment of the competency of the firm and the expected quality of the output. The program manager may use more than one firm for different components of the research in order to take advantage of the specialties of different firms (i.e., Consumer Insight might be used for media tracking while Consumer Research International might be used for retail tracking).

3. Possible Levels of Effort, Illustrative Budgets and Timeframes

A rough budget for the thorough study of the Nairobi market would total approximately \$20,000 (1,560,000 Kenyan Shillings). A rough breakdown of some of the components that should be included in a consumer study is presented in the following table. The total budget is dependent on the number of respondents in the survey and the number of focus groups conducted.

Activity	Number of respondents or groups	Unit Cost (Kenyan Shillings)	Total Cost (Kenyan Shillings)	Total Cost (US Dollars)
Focus groups	5	65,000	325,000	4167
Survey (face to face interview)	800	800	640,000	8205
Retail tracking	Varies	---	200,000	2564
Media tracking	Varies	---	200,000	2564
Other expenses			195,000	2500
Total			1,560,000	20,000

*\$1 = 78 Kenyan Shillings

The above scenario can be considered the “low level” budget option. Higher levels of support would allow similar activities to be undertaken in other major cities. A rough estimate of \$10,000 to \$15,000 per city is reasonable. A reasonable timeframe to consider is 3 to 6 months for each city.

Performance Monitoring: Anticipated Performance Targets, Indicators and Baseline Information

The data products and analysis should be presented to the program manager in a form to be determined at the outset of the program design.

SDPH Key Ancillary Activity 2: Consumer Education and Promotion Initiative

A. Past Strategy and Interventions

Traditional development activities have focused on supply side activities ignoring demand side issues (including effective demand (income) and taste and preferences).

B. Problems of Today and Possible Responses

Market-oriented production responds to the needs and preferences of consumers. However, consumer awareness of the link between particular needs and preferences and certain products must be built. There is a clear need to increase consumer awareness of the nutritional benefits of fruits and vegetables and other quality attributes that will lead to increased consumption of horticultural products in the domestic market.

Currently, consumer organizations are weak and there is little coverage of consumer issues in the media. Informed and educated consumers and a strong consumer

organization are necessary in a market-driven sector particularly in the absence of government enforcement of food quality and safety regulations and nutritional information dissemination. An area of particular concern is that of poorly enforced food safety and health regulations that can lead to increased sickness and loss of productivity. In Kenya, as in most developing countries, food-borne illness is a major cause of morbidity, leading to both lower labor productivity and lower incomes. Food and water-borne diseases pose a particularly significant risk to the large population of immunocompromised individuals suffering from HIV/AIDS.

The need for a strong consumer voice may not be readily apparent in a weak economic environment. However, it is even more important in a weak economic environment because consumers are looking for value for their money (value = quality/price). The effects of this situation are particularly important for women because the responsibility of family management, including the family budget, hygiene, nutrition and food safety, falls on them.

C. New Activity: Consumer Education and Promotion Initiative

1. Description of Activity Components, Target Groups and Linkages to SO and RF

1.1 Activity Components

(i) *Promotion and Education Campaign.* After the initial consumer research study, campaigns can be developed to target specific audiences with the goal to increase the consumption of fruits and vegetables. These campaigns can focus on a variety of messages including nutrition education and food safety as well as more commercial aspects like ‘buy Kenyan products.’ In order to reach a number of market segments, various media outlets should be used.

Steps

- Use information on target groups, consumer concerns, and media outlets that were identified in the consumer research initiative to develop the advertising/promotion message(s) and the proper media outlet.
- Use a public relations and/or advertising firm to develop the message(s).
- Explore alternative marketing techniques for reaching different target audiences, particularly the low-end market. For example, ‘experiential marketing’ techniques utilize skits, cooking demonstrations, and product sampling to deliver a particular message to the audience. This could be particularly beneficial for disseminating information on nutrition.
- Use a consumer research firm to test market the advertising message(s).
- Launch message(s) in appropriate media outlets.
- Use the most appropriate mix of paid media outlets (print, radio, TV) for specific target audiences.
- Use the Consumer Information Network (CIN) to distribute information. The CIN could be particularly effective in reaching the low-end consumer because they can

mobilize volunteers from their organization as well as partner organizations (other NGOs, Women's groups and cooperatives) to distribute flyers and organize the 'experiential marketing' programs described earlier. The CIN is a national consumer organization with a mission of empowering consumers. Its objectives are to protect consumer rights and promote consumer responsibility through activities such as consumer education and awareness campaigns, consumer representation, and research. CIN has a membership of over 2000 individuals countrywide.

- Explore the possibility of providing nutrition teaching modules and the supporting materials to schools.
- Track message(s) effectiveness (using a consumer research firm like Consumer Insight's Adtrack).

(ii) *Raising Consumer Awareness – Creating Consumer Consciousness.* This initiative would seek to interject consumer consciousness into debate in civil society. Whereas the educational and promotional campaign described above would specifically focus on the goal of increased consumption of horticultural products, this initiative would focus on raising consumer awareness and creating consumer consciousness in the agri-food sector as a whole including food products as well as agri-inputs and services. This type of initiative would include a number of different activities.

- Utilize 'free' media exposure by providing story ideas and the necessary information to reporters. Target newspapers, magazines, and radio and TV talk shows.
- Sponsor monthly lectures or debates on topics of interest relating to consumers and the agri-food industry.
- Respond to emerging issues and consumer complaints.

1.2 Target Groups

The campaign should focus on reaching as many consumers as possible. To this end, it is envisioned that the campaign would target two groups, high-end and low-end consumers. Of course this bifurcation of the consumer market should be supported by the data obtained in the consumer research initiative.

1.3 Linkages to SO and RF

This initiative fits into the SO7 results framework under IR 7.2:

- IR 7.2.2 Improved performance of horticultural marketing system
- IR 7.2.3 Improved delivery of services to facilitate horticultural trade

The horticultural marketing system will be improved by this initiative (IR 7.2.2) through the increased consumption of horticultural products. Other benefits include the following:

- Improved food safety leading to improved health and labor productivity, particularly with respect to the number of days missed from work to due illness.
- Improved nutrition through both the quality improvement and increase in quantity consumed leading to improved health and labor productivity.
- Improved quality leading to improved consumer satisfaction.

2. Envisioned Methods of Implementation and Participating Institutions

(i) *Promotion and Education Campaign.* A consumer research firm and a public relations/advertising firm can be hired to provide the technical expertise for the administration and results monitoring of the promotional campaign. The CIN can also be used to distribute information.

In this scenario cost-sharing possibilities could be explored with the major supermarkets, Uchumi and Nakumatt.

(ii) *Raising Consumer Awareness – Creating Consumer Consciousness.* The natural home for this type of initiative is the Consumer Information Network (CIN). Other potential partners and collaborators include the NGOs working in the areas of human health and nutrition, Food Forum, women in media organization, other women's groups, and medical professional associations.

3. Possible Levels of Effort, Illustrative Budgets and Timeframes

(i) *Promotion and Education Campaign.* There are several consumer research and marketing firms in Nairobi that are capable of conducting this type of campaign. It is difficult to provide exact budget estimates because the costs are highly dependent on the type of media chosen.

For illustrative purposes, a rough budget for a 6-month radio campaign to reach high-end consumers in the Nairobi market would total approximately \$50,000. Costs that must be considered and that are included in the estimate are message development and pre-testing, airtime, and effectiveness monitoring.

A budget for a promotional campaign to reach low-end consumers in Nairobi using a combination of brochures and experiential marketing techniques (skits, cooking demonstrations, etc.) would total approximately \$35,000. This cost estimate includes the printing and distribution of flyers, organizing other activities, and materials.

However, according to marketing specialists, a longer and broader campaign would be necessary to achieve any meaningful change in consumer behavior. Thus, a minimum support level or “low level” budget option for a consumer campaign in Nairobi is \$300,000 for a two-year timeframe. Higher levels of support would allow similar activities to be undertaken in other major cities and/or rural promotional campaigns.

(ii) *Raising Consumer Awareness – Creating Consumer Consciousness.* The logical home for this type of activity is the Consumer Information Network (CIN). As stated earlier, CIN is a national consumer organization. Its current structure is small (10 full-time people in Nairobi and Mombasa) and the administration is highly competent. The chief executive is committed to maintaining a sustainable organization making CIN an attractive location for a general consumer awareness initiative. One scenario is that funding could be provided for some portion (½ time to full) of the salary of one market analyst and an operating budget. The low-level option here is \$100,000 over a 3-year

period. Higher levels of support (\$200,000 to \$500,000) would allow for more activities (debates, lectures, forums, etc.) and/or funding over a longer time horizon.

4. Performance Monitoring: Anticipated Performance Targets, Indicators and Baseline Information

A consumer research firm can be engaged to monitor the effectiveness of the campaign. This would be done by measuring the awareness of the message(s) and behavior changes associated with the message(s). Changes in the behavior can be quantified into a percentage increase in consumption of horticultural products. A reasonable goal for increased consumption can be identified during the test market stage.

Overall consumer consciousness can be measured by amount of media coverage of consumer issues. It can also be monitored by the participation of consumers and consumer organizations in policy dialog and the policy making process. Currently there is very little consumer representation beyond the participation of the CIN on the Codex Committee of the Kenya Bureau of Standards.

SDPH Key Ancillary Activity 3: Agribusiness Linkages Initiative

A. Past Strategy and Interventions

Too often in the past, interventions in horticulture have emphasized the supply side of the market without due attention to the demand side of the market. Smallholders therefore have rarely had the opportunity to learn either how to access relatively discriminating domestic and export markets or to use market intelligence.

B. Problems of Today and Possible Responses

The marketing situation for smallholders in Kenya varies enormously from farm gate selling to market assemblers through to organized cooperative activities selling into increasingly discriminating markets in large urban centers. Too many smallholders are engaged in the former activity and too few in the latter. A similar situation exists in the export market. While many exporters of flowers do rely on outgrowers, too few of these are smallholders.

This activity illustrates how support can be given to facilitate the entry of smallholders into new markets, both domestic and export, as a vehicle for learning about and improving the performance of horticultural marketing systems. It also illustrates how smallholders can learn how to collaborate with agencies such as NGOs and micro-finance providers, and to learn key aspects of financial management from them.

C. New Activity

1. Description of Activity Components, Target Groups and Linkages to SO and RF

1.1 Activity Components

For most smallholder farmers the key missing element in the transaction is their knowledge of the supply chain and where they fit into it. Thus, assistance in providing this information and a means of linking them to other actors in the supply chain is essential. This activity addresses the need for agribusiness linkages by outlining a flexible, deal-making activity to be embedded within SDPH. An essential learning process of this activity is that farmer groups will learn how to operate in a vertically coordinated supply chain and specifically how to use market information, i.e., how to turn market information into market intelligence.

In this activity, the program manager acts as a deal-making facilitator between smallholder farmer groups and potential buyers including larger farmers, exporters, wholesale/distributing firms, processors, and supermarkets. In each deal, consideration should be given to the feasibility of a cost sharing approach. However, the specific guidelines should remain flexible enough to allow the manager to assist farmer groups to take advantage of a range of different market opportunities.

The program manager assists the farmers in two specific areas: identification of the market opportunity and brokering the specifics of the deal (quality and volume assessments, etc.). It should be stressed that the urban markets in question would not be the public wholesale or informal peri-urban markets, although direct and regular supplies could be considered to organized small-scale retailers such as kiosk owners.

The district facilitators will be responsible for assisting farmers to obtain the services needed by the farmers in order for them to fulfill their part of the deal. The services that farmers need will vary among groups and the specifications required in the deal.

Potential services include:

- *Farmer Group management and business skills development* are an essential aspect of this activity. In order to address this issue, the program manager can build partnerships with a business oriented NGO to provide services such as
 - Strengthening farmer group formation and governance.
 - Working with the farmer groups to improve accounting and record-keeping procedures, notably for full traceability and conformity with the Code of Practice.
 - Assisting the farmer groups with the development of medium to long-term business plans, and providing business advice and guidance to the group members as appropriate.
 - Providing specific guidance and advice to the immediate buyer (if needed) in terms of improved business practices, assisted preparation of a longer-term strategy and a new business plan to achieve those strategic objectives.

- *Financing* is often identified as a key constraint for smallholder farmers and farmer groups. However, establishing a good credit facility requires specialized management. Since such specialized management is beyond the core elements of the SDPH, it is recommended that the project manager create partnerships with the specialist microfinance institutions that are already operating effectively. The microfinance institution can provide commercial loans to farmers for the purposes of investment in improved production and post-harvest equipment and facilities (e.g. irrigation pumps and associated equipment, plastic crates, charcoal coolers, vegetable washing and preparation equipment and rudimentary sheds, etc.). Working capital and vital input supplies such as fertilizers and pesticides could also be provided by the microfinance specialist upon preparation of a suitable business plan.
- In order to foster the development of the agribusiness services sector, specialist consultants and commercial service providers should be used to supply technical know-how and training to the farmer groups. The district facilitators will assist the farmers in the initial selection and provision of such commercial services, including payment for services. The farmer groups should be required to contribute a small percentage of the cost of the service provision initially but with progressive transfer of these cost directly to the beneficiaries of the service. One scenario is that the farmers pay 25 percent of the cost of the service in the first year, 50 percent in year two, 75 percent in year three, and the full amount by year 4. However, in order to account for local specificities and issues, the exact specifications should be determined by the project manager and district facilitators. All service provisions and consultancies are to be managed by the district facilitator with agreed clear terms of reference and deliverables specified in consultancy contracts.

1.2 Target Groups

This activity will benefit several target groups including farmers groups, traders, wholesale firms, retailers, and agribusiness service providers.

Clusters of self-identified small-scale growers are the direct beneficiaries of the activity, as they will receive assistance in market identification and transaction negotiations with different types of firms and private entrepreneurs, as well as from technical and professional staff of NGOs and government agencies. Each cluster would consist of 25 to 30 small-scale growers with their own land. Other characteristics to be considered during the selection process include

- The land location should be in an agro-ecological zone appropriate for the production of consistently high quality vegetables and fruits.
- The growers groups should be in a finite geographic area.
- They should have ready access to reliable and consistent water resources.
- Their land should be readily accessible from properly established feeder roads and preferably within a three-hour trucking radius of the buyer's warehouse and operational center(s).

Exporters, supermarkets, institutional buyers, agribusiness service providers, and consumers are also beneficiaries of this activity.

1.3 Linkages to SO and RF

This activity contributes to each of the intermediate results of SO7

- IR 7.1 Increased productivity of horticulture
 - IR 7.1.2 Increased use of technology
 - IR 7.1.4 Increased participation of private sector delivery of services
 - IR 7.1.4.1 Strengthened capacity of private sector institutions to provide services
- IR 7.2 Increased horticultural trade
 - IR 7.2.2 Improved performance of horticulture marketing systems
 - IR 7.2.3 Improved delivery of services to facilitate horticulture trade
- IR 7.3 Increased access to business support services
 - IR 7.3.3 - Increase in cost-effectively delivered non-financial services
- IR 7.4 Increased business effectiveness of smallholder organization
 - IR 7.4.2 Abilities of smallholder organizations to manage their own business activities strengthened
 - IR 7.4.1.1 Strengthened role of GoK in facilitating the formation and functioning of smallholder groups/cooperatives/associations

Horticultural produce buyers are also direct beneficiaries of this activity, as improved contractual arrangements with small growers will enhance the efficiency of a percentage of their supply schemes, and will allow them to better meet new consumer demands involving quality and ethical concerns.

Agribusiness service providers will also benefit from this activity through increased demand for their services.

2. Envisioned Methods of Implementation and Participating Institutions

As stated earlier, this initiative should be housed within the SDPH as one of the five key ancillary activities. The program manager along with the district facilitators will serve the core function of identification of market opportunities and then linking farmer groups to the buyer and the necessary service providers. In order to keep the costs of the activity under control as well as to take advantage of the core competencies and specialities of particular organization, the program manager will establish partnerships with other institutions as described earlier in the activity description. Potential partners include NGOs like Technoserve, CRS, CLUSA, and VOCA, as well as smaller Kenyan NGOs. Microfinance could be supplied by FAULU or KREP or another organization, but is not likely to be a commercial bank. The key selection criteria are: (a) professional capacity to work with small farmers and CBOs with proven ability to deliver measurable results and impacts; (b) well established capacity to follow business-oriented approaches as a core characteristic of the organization.

Based on information obtained during stakeholder interviews, there are a number of linkage opportunities. The most promising opportunity in the domestic market is with one of the leading supermarkets, Uchumi. Other possibilities include linkages with wholesale distributors like Mugoya Vegetables and Westlands Fresh and with processors. One

potential lead that should be explored is a linkage with Del Monte Kenya for supplying mangoes or mango juice concentrate and for supplying tomatoes for processing into ketchup. Del Monte Kenya has recently been acquired by Cirio Alimentare, a multinational food processor with headquarters in Italy.

The most promising opportunity in the export market is Summer flowers for export into the European markets for bouquets. Summer flowers are high value and thus, have higher profit margins than french beans and asian vegetables and there is potential for value-added processing with in-country bouquet design. Potential market linkages are with Pemmiculture as the immediate buyer and the exporting to be through Carzan. This is a limited field at present and there are few candidates as good as Carzan. If the model with Pemmiculture proves to be effective, then there are two or three other outgrower set-ups also supplying Carzan which would allow for further replication.

The methods and activities to be carried out in each deal will be up to the program manager and the firm to design and negotiate. They could include, for example, technical assistance and field supervision services; training in production, grading, and quality control; building of produce collection, grading and packaging facilities in or near the production areas; and price incentives to accelerate innovation processes in production or post-harvest activities. The proposed nature of the activities to be carried out with the farmers will be such that after a maximum of three years it should be possible to financially sustain them without any external subsidies.

The NGOs or private firms who become partners in this program will supervise the implementation of a portion of the activity according to the terms of the partnership agreement proposal. In particular, the partners will have the responsibility of carefully systematizing and documenting these experiences to extract from them strategies, methods, and techniques that can be replicated by other private firms and CBOs.

3. Possible Levels of Effort, Illustrative Budgets and Timeframes

A rough budget for three different budget scenarios, low, medium, and high, for the agribusiness linkages activity is presented below. There are two major cost elements in this activity, the co-financing of support services and the salary of an agribusiness linkages specialists. While the exact number of farmer groups will vary depending on the availability of marketing opportunities, the following calculations assume that over a 5 year period 12 groups per district will participate in the activity. Participation of the groups will be staggered with each group receiving up to \$3000 in the first year of their participation, \$2000 in the second, and \$1000 in the third.

The second major budget component is the salary for the agribusiness specialist. This person will be located in the Nairobi headquarters office of the SDPH program. This person will assist the program manager and district facilitators to implement and coordinate the various components of this activity.

Year	1	2	3	4	5	Total
Cluster 1 (4 groups)	12,000	8,000	4,000	---	---	24,000
Cluster 2 (4 groups)	---	12,000	8,000	4,000	---	24,000
Cluster 3 (4 groups)	---	---	12,000	8,000	4,000	24,000
Total for 1 district						72,000
Salary for agribusiness linkages specialist	30,000	32,000	34,000	36,000	38,000	170,000
Low budget option: 3 districts						386,000
Medium budget option: 5 districts						530,000
High budget option: 7 districts						674,000

4. Performance Monitoring: Anticipated Performance Targets, Indicators and Baseline Information

The performance of this initiative can be monitored in several ways. Two key indicators for the success of the activity are the number of deals or linkages made and the continuance of the relationship after the end of the activity. Goals for the number of deals or linkages made should be set by the manager and district facilitators during the project planning stage. An ambitious yet reasonable goal for the first year of operation is the identification and implementation of three to four market linkages. These initial deals can serve as pilot cases for the identification of best practices to be used in future deals.

The evaluation of effectiveness and impact of the two programs linking farmers with private firms, can be conducted using a case study method, including counter-factual cases of farmers who have not benefited from these activities. The evidence from the case studies can be combined with a success/failure ratio to evaluate the effectiveness of the activity.

Farmer group performance can be monitored by benchmarking several key indicators. The accounts and records of the groups and individual members will provide accurate and regularly updated information on growers' scale of operations, employment offered on and off farm, gross and net income, as well as increases in net worth. These can all be compared with a baseline assessment made when the growers' individual and group business plans are prepared for loan acquisition purposes.

SDPH Key Ancillary Activity 4: Business Services Development Initiative

A. Past Strategy and Interventions

Providing access to goods and services to horticultural smallholders has been a goal of a large number of development projects supported by bilateral and multilateral donors, NGOs, and government agencies. However, many of the past initiatives have concentrated on the actual delivery of a set of goods and services and have not paid attention to developing sustainable markets for such goods and services.

Hence, a large number of smallholders would like to access goods and services but lack effective demand capacity. There are also a number of potential suppliers of such goods and services that have limitations in accessing their potential clients. The bridges linking both sides of these markets are weak or nonexistent.

Recognizing the need for business service development, USAID Kenya commissioned a business services design in October 2001. DFID is also in the final stages of launching a £2.9 million business services market development program.

B. Problems of Today and Possible Responses

As stated earlier, while CBOs are a great strength of the Kenyan rural economy and have proven to be an effective means for dealing with local issues, most CBOs have great difficulties in dealing with constraints and opportunities that involve decision-making beyond the local level. This difficulty in dealing with external issues is the result of weak or nonexistent institutions and networks that can link innovation at the local level with agents, processes, incentives and assets located at the regional, national or international levels. The old or conventional model that was supposed to play this bridging role in agricultural innovation in Kenya (the linear, top-down and supply-driven research-extension-production scheme) is basically defunct and has not been replaced by any viable alternative.

The CBOs represent a prime leverage or amplification point to develop and strengthen the capacities of smallholders to demand and access goods and services. The effectiveness of this approach will be hampered if the project does not pay attention to the supply side of the equation, namely, the strengthening of the capacities of private and public sector stakeholders to respond to the increased and improved demand of small horticultural growers.

Most development projects have assumed that the individuals who are charged with the actual delivery of professional services to small farmers are sufficiently motivated and capable of providing the best possible response to their clients' demands, even in the context of complex and dynamic sectors such as horticulture. Or else, even if this assumption is known to be untrue, it is *de facto* assumed that poor farmers are content with poor services, so that nothing or little is done to improve their incentives and capabilities.

If enhanced (quantity and quality) demand on the part of CBOs and smallholders is to lead to increased rural household income, it is indispensable that this project addresses also the improvement of the supply response.

C. New Activity: Business Services Development Initiative

1. Description of activity components, target groups and linkages to SO and RF

1.1 Activity components

Given the heterogeneity of the different regions in which horticulture is important, and also to reduce the distance between effective demand and the decision-making process, a Business Services Fund (BSF) should be established in each of the SDPH district offices. The BSF will have the objective of **improving access** by small growers, through their CBOs, to goods and services that are required to facilitate innovation in horticulture.

The distinction between “improving access to goods and services” and “providing goods and services” is critical to the design of this activity. It is also highly important in order to avoid duplication with the work of many NGOs, government programs, development projects or private sector firms, who are engaged in the actual provision of goods and services to smallholders, as opposed to the BSF that will aim at strengthening the organizations, institutions and networks that are required to improve access to those goods and services.

(i.) *Strengthening the Demand for Business Services.* The BSF will allocate small grants of up to about \$ 650 per project, on a competitive basis, to proposals submitted by any type of CBO that is engaged in activities related to horticulture. To be able to participate in this activity, CBOs will need to meet pre-established eligibility criteria. The Funds will co-finance these proposals, providing 50% or less of the total cost of the proposed activities.

The activities supported by the Fund may be related to any aspect of horticulture production and marketing including business planning and management, market intelligence, production, collection of produce, marketing and distribution, quality control, processing, storage, transportation, training, input supply, service provision, legal services, and accounting services.

(ii.) *Strengthening the Supply of Business Services.* The program will start by identifying the technical and professional services that are more frequently demanded by small growers in each of the three main horticultural crops in each district. The assessment will include consumer preferences and demands, potential services to production, post-harvest, marketing, natural resource management, and business planning and management. The assessment will also include an evaluation of the effective demand (willingness to pay) for training on specific topics, on the part of field-level staff (or their employers). The results of the assessment will be consolidated and prioritized by the district facilitator and used to develop a training program for field-level service providers.

It is important to note that in order to facilitate the development of markets for business services that both the demand for and supply of services is addressed in the activity.

1.2 Target groups

CBOs of small horticultural growers are the direct beneficiaries of the activity, as they will improve their access to the goods and services needed to innovate and improve their production, marketing, and management practices.

Providers of goods and services required by small horticultural growers direct beneficiaries of this activity due to training and skill development as well as indirect beneficiaries of the activity, due to the increased demand for goods and services that this activity will promote.

Private firms in the marketing and distribution system of flowers, fruits and vegetables are also indirect beneficiaries due to the increased efficiency and reduced transaction costs that will be achieved due to the improved capacity of small growers to enter into agreements and contracts.

Consumers of horticultural products will also be indirect beneficiaries as the improved integration of horticultural innovation systems should result in reduced prices and improved quality of vegetables, goods and services.

1.3 Linkages to SO and RF

By focusing on the development of more effective networks linking small growers with all other public, commercial and non-governmental stakeholders relevant to horticulture in the selected Districts, this activity will impact on all of the Intermediate Results (IRs) of SO7, as follows:

- IR7.1 - Increased Productivity of horticulture is increased as small growers gain improved access to goods and services (IR 7.1).
- IR7.2 - Increased horticultural trade, through the reduction of transaction costs of agreements and contracts linking various stakeholders across the system.
- IR7.3 – Increased access to business support services, this being a direct or immediate product of this activity.
- IR7.4 – Increased business effectiveness of smallholder organizations, through the support provided to them through this activity to improve their capacities to engage in mutually beneficial agreements and contracts with other stakeholders.

2. Envisioned Methods of Implementation and Participating Institutions

The initiatives for strengthening both the supply and demand for business services in the SDPH districts will be managed in each district by the district facilitator.

(i.) *Strengthening the Demand for Business Services.* The BSF will be governed by a single Rules and Operations Manual, prepared under the leadership of the program manager and approved by USAID. Once the Manual has been approved, several half-day workshops will be held in locations throughout the participating districts, to inform CBOs, extensionists, NGOs, etc.

Calls for proposals will be published at least once a year. Each call for proposals will specify the eligibility and merit criteria that will be used to evaluate the proposals, the

types of organizations that can submit proposals, the types of activities that can be funded, the funding limits, the requirements in terms of financial and technical reports, and the rights and duties of the participants.

Formal contracts will be signed between the program (represented by the district facilitator) and the selected CBOs. Funds will be transferred directly to the accounts of the selected CBOs. CBOs will report on the activities conducted in each project, the results obtained, and the lessons learned. CBOs will also provide a financial report, listing all sources of income and the expenses of their projects.

(ii.) *Strengthening the Supply of Business Services.* The results of the business services demand assessment will be consolidated and prioritized by the district facilitator. In consultation with the program manager and the other district facilitators, the district facilitator will choose a particular set of services where capacity building is needed. An open call will then be published for any interested public or private organization to submit detailed proposals for ‘training’¹ field-level technical and professional staff of NGOs, government agencies and development projects in these areas of need. The competing organizations will have to demonstrate their expertise in each area in which they have expressed an interest. The cost of the ‘training service’ will also be a criterion for selecting the organizations in charge of each topic.

After the trainer organizations have been selected, they will be charged with developing the ‘training’ curricula, and organizing all aspects of the ‘training process’. The ‘trainees’ (or their employers) will pay 20% of the direct costs of being ‘trained’. A system of price incentives may be put in place to encourage individuals to take the full set of courses available in his/her district, as this would have a more significant impact of strengthening his/her capacities than if he/she only took one or two courses. The district facilitator will supervise the implementation of the ‘training’ program according to the terms of the proposal.

2. Possible levels of effort, illustrative budgets and timeframes

(i.) *Strengthening the Demand for Business Services.*

Each BSF will have a pilot Call for Proposals during the second half of year 1, allocating a total of \$ 10,000 among approximately 15 projects/CBOs.

¹ We are very conscious of the limitations of language here. While we use the word *training* in this document, and refer to *trainers* and *trainees*, we do not mean these words in the conventional senses in which they are used. We actually mean the *facilitation of learning* by *facilitators* for *learners*— but these are still too cumbersome to use, and so we have stuck with the conventional words, while placing them in inverted commas to illustrate the emphasis on active, social and participative learning that is inherent in systemic development. Similar difficulties arise with the word *curriculum*. This would be more appropriately expressed as *pedagogy*, which is, however, a somewhat obscure word, and so we persist with convention, while again emphasizing that our clear emphasis is on the need for a shift from an approach to development based on ‘training’ (and the transfer of knowledge) to one based on ‘learning’ (and the co-generation of knowledge).

After the rules and procedures are adjusted based on the experience of this initial or pilot effort, each BSF will subsequently one Call for Proposals per year. The budget to be allocated will increase gradually up to the third year and stabilize after that.

A proportion of the approved projects will be selected for monitoring in the field by independent consultants. The intensity of monitoring will be of 50% for those projects approved during the first (pilot) Call, and of 25% thereafter. The total cost of this field monitoring is of \$3055.

All approved and funded projects will submit a final report of activities, results, and lessons learned, as well as a financial report (income and expenses). These reports will need to be reviewed by the district facilitators.

The following chart outlines a tentative budget for this activity.

	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Total
Number of projects funded	15	30	45	45	45	180
Grant total	\$10,000	\$20,000	\$30,000	\$30,000	\$30,000	\$120,000
Projects monitored	7	7	11	11	11	47
Monitoring cost @ 65 each	455	455	715	715	715	\$3055
Other costs	389	389	389	389	389	\$1945
Total per district						\$125,000
Low budget option: 3 districts						\$375,000
Medium budget option: 5 districts						\$625,000
High budget option: 6 districts						\$875,000

(ii.) *Strengthening the Supply of Business Services.* The budget is estimated as follows:

- In each District, a total of 5 different priority training demands are selected.
- The cost of developing and updating the training program for each of the five topics, is estimated at \$5,000, or \$25,000 for the five topics.
- In each district, 25 field-level staff are ‘trained’ in each of the five topics each year, for a total of 125 persons ‘trained’ per year, or 625 over the five year period².

- The cost of ‘training’ is of \$ 200 per person per course. The ‘trainees’ pay for 20% of the total cost. The cost to the program is of \$100,000.
- The total cost per district is then \$125,000, for 625 person-equivalent ‘trainees’ over the five year period.

Hence, the budget is as follows:

Low option: \$125,000 per District x 3 Districts = \$357,000 for 1875 ‘trained’ staff

Medium option: \$125,000 per District x 5 Districts = \$625,000 for 3125 ‘trained’ staff

High option: \$125,000 per District x 7 Districts = \$875,000 for 3750 ‘trained’ staff

4. Performance Monitoring: Anticipated Performance Targets, Indicators and Baseline Information

(i.) *Strengthening the Demand for Business Services.* A baseline study will be conducted during the first half of year 1, using one of the many participatory methods that focus on the description and understanding of the networks in which CBOs are participating. A similar study will be conducted at the end of the project to evaluate final results and impacts. The final study must select its case studies from the CBOs supported by the BSF, as well as a counter-factual sample of CBOs that have not participated in this activity.

The key indicators of the effectiveness of this activity should be:

- Changes in the types and numbers of organizations outside the local level with which the CBOs are engaged for purposes directly related to horticulture.
- Changes in the capacities of the CBOs to identify and prioritize the goods and services they demand in order to innovate in horticulture, the potential sources of such goods and services, and the networks through which they can link their demands with the potential sources of supply.
- Changes in the capacities of the CBOs to engage in communication processes with other agents above the local level, and to negotiate, monitor and enforce agreements and contracts with such stakeholders.

The key indicator of relevance of this activity to the smallholders should be the number of proposals submitted and the level of financial resources effectively committed by the CBOs to co-fund their projects.

(ii.) *Strengthening the Supply of Business Services.* Key indicators of effectiveness are:

- Number of field level staff that participated in the ‘training’ program while effectively paying at least 20% of their direct training costs.
- The evaluation of effectiveness and impact of the program for ‘training’ of field level staff, which can be conducted by analyzing the reports presented by the ‘training’ organizations and their supervisors (effectiveness), and by means of a survey to a representative sample of farmers attended by ‘trained’ and ‘un-trained’ staff.

SDPH Key Ancillary Activity 5: Farmer Field Schools

A. Past Strategy and Interventions

Extension in Kenya, as in most developing countries, has followed the linear “transfer of technology” approach. Today, there is a very strong agreement among international experts that this approach is not suitable to address complex problems, which are characterized by dynamic policy and market environments, by high degrees of risk and uncertainty, and by the participation of multiple stakeholders, each with a particular perspective on the problem and how it should be solved. All of these are characteristics faced by Kenyan horticultural small growers and other stakeholders in Kenyan horticulture.

Under these conditions, the most suitable approaches to development are those that foster and facilitate learning processes at the local level, as opposed to transmission of pre-packaged technical messages. By learning processes we mean those in which farmers learn to ask appropriate questions, search for possible solutions both through local experimentation and through communication with others (traders, exporters, extensionists, researchers, input suppliers, farmers in other areas, and so on), test different options, and create answers to their questions that are then communicated from farmer to farmer and beyond. Such collective learning leads to both personal and group empowerment

One method that has followed this learning approach with a very high degree of success is known as Farmer Field Schools (FFS), pioneered in Indonesia and the Philippines for the large-scale promotion of Integrated Pest Management (IPM). The method is now in use in many developing countries, and is being used as a comprehensive vehicle for ‘development through learning’ that extends way beyond its original foundations in IPM.

FFS were introduced in Kenya by FAO in 1995. There are currently over 600 FFS in operation, including about 150 in four Districts of Central Province, which are targeting the adoption of IPM for horticultural crops, both for the export and domestic markets. This pilot program in Central Kenya was triggered by exporter and producer demands to find technically and economically viable options to address the issue of Maximum Residue Levels (MRLs). The FAO FFS pilot program in Central Kenya is due to end this year (2002).

B. Problems of Today and Possible Responses

Due to rapidly changing consumer preferences and other market considerations, there is a need to foster an environment of continuous innovation in order for horticultural production to remain competitive and responsive to the demands of consumers.

Currently, IPM is the preferred technical option to deal with the issues involved in pest management, as it simultaneously addresses the needs of farmers to keep production costs low, the preferences of consumers in terms of low or no-residue levels in fruits and vegetables, and the demands of society to minimize the environmental and health impacts of agricultural production.

FAO's FFS pilot program in Central Kenya has proved to be a cost-effective way to address both the issues of fostering an environment of continuous innovation at the farm and village levels and producing fruits and vegetables in a way that is technically, economically, environmentally and socially sound.

C. New Activity

1. Description of activity components, target groups and linkages to SO and RF

1.1 Activity components

In order to address the on-farm needs of horticultural farmers, one of the specific activities of the SDPH should be the establishment and operation of Farmers' Field Schools (FFS) in each district of operation of the SDPH.

This activity will follow the FFS method as adapted by FAO to Central Kenya conditions. The main characteristics of the method are as follows:

- Existing CBOs are selected and invited to establish FFS. It is envisioned that all of the SDPH groups will establish FFS as well as other CBOs.
- 'Trainers' (frontline extensionists who will facilitate the FFS) take part in a two week 'training' course.
- About \$650 are transferred to each CBO operating a FFS to pay the costs of establishing and operating their FFS. Each CBO is responsible for managing its own funds and paying the group's costs, which includes the transportation and lunch costs of the 'Trainers' (extension agents), inputs and materials required to set up the trials and demonstrations, Field Days for neighboring farmers at the end of each season, etc. Farmers mobilize additional resources to pay for extra-curricular activities, such as "Special Topic" presentation by invited specialists, additional trials of new crops or techniques, etc.
- Each FFS meets one a week, usually for about four hours. Any "Special Topic" activity is also included in this schedule. All activities, observations, findings and lessons learned are carefully recorded for future reference. As the crop season comes to an end, a Field Day is organized to show the results and disseminate the findings to the neighbors, as well as to representatives of other FFS.
- Each FFS selects one or more of its members who qualifies to be recognized as a new trainer. These farmer trainers help other CBOs set up their own FFS.

1.2 Target groups

The target group of this activity is smallholder horticultural producers who are members of the SDPH groups as well as other CBOs. The estimated number of farmers that will be reached in the activity depends on the level of funding. As shown below in section three, this number ranges from 15,000 to over 30,000 farmers.

1.3 Linkages to SO and RF

By using IPM as the entry point of the FFS, this activity will impact on the following Intermediate Results (IRs) of SO7

- IR7.1 - Increased productivity of horticulture
 - IR7.1.2 – Increased use of technology
 - IR7.1.3 – Sustainable use of natural resources in horticulture

This activity will contribute to SO7, increased household income of horticultural smallholders. Their income will increase due to their enhanced capacity to engage in continuous innovation leading to higher productivity (IR 7.1), lower costs (IR 7.1.2), and improved quality of their produce. Moreover, the health of the farmers and their families will be improved through better knowledge and understanding of how to effectively and safely use pesticides.

Kenyan consumers will also benefit from the reduction brought about in chemical residues in the fruits and vegetables produced using IPM.

2. Envisioned Methods of Implementation and Participating Institutions

The program manager will choose an organization to implement the FFS through a competitive proposal process. The manager should consult with the FAO representatives about their experiences, both positive and negative, with particular individuals and organizations. A key partner in the FFS activity is the Ministry of Agriculture and Rural Development because following the FAO model the District extension service facilities can be utilized by the FFS. This is a ‘win-win’ relationship between the Ministry and USAID because both parties bring critical elements to the activity. The Ministry provides land and local expertise while USAID provides funding for the activity as well as professional development for the extension agents involved in the FFS.

3. Possible levels of effort, illustrative budgets and timeframes

FAO in Kenya has about seven years experience with the use of the FFS method. During this time, the method has been adapted and validated under Kenyan conditions.

The budget for this activity is estimated based results on data from FAO’s two-year FFS pilot program in Central Kenya that consisted of 144 FFS.

FAO’s results in Central Kenya suggest that two crop seasons are required for an FFS to be established and to produce the intended results. Specific results are achieved through a process of “learning by doing” of the principles, methods, and techniques of IPM and through fostering an environment of continuous innovation through learning processes at the farm and village levels. Given the duration of most horticultural crops from land preparation to harvest, normally both crop seasons can be accommodated within one calendar year.

According to FAO’s experience, the cost of setting up and operating approximately 150 FFS per District, each with 25-30 members, is about \$ 150,000 for one year (two crop seasons). The following table shows several budget options for the establishment of FFS in the SDPH districts.

Option	Year 1	Year 2	Year 3	Total Cost in USD	Farmers Served
Number of FFS per district	25	50	100	175,000	5250
Low budget option = 3 districts	25	50	100	525,000	15,750
Medium budget option = 5 districts	25	50	100	875,000	26,250
High budget option = 7 districts	25	50	100	1,225,000	36,750

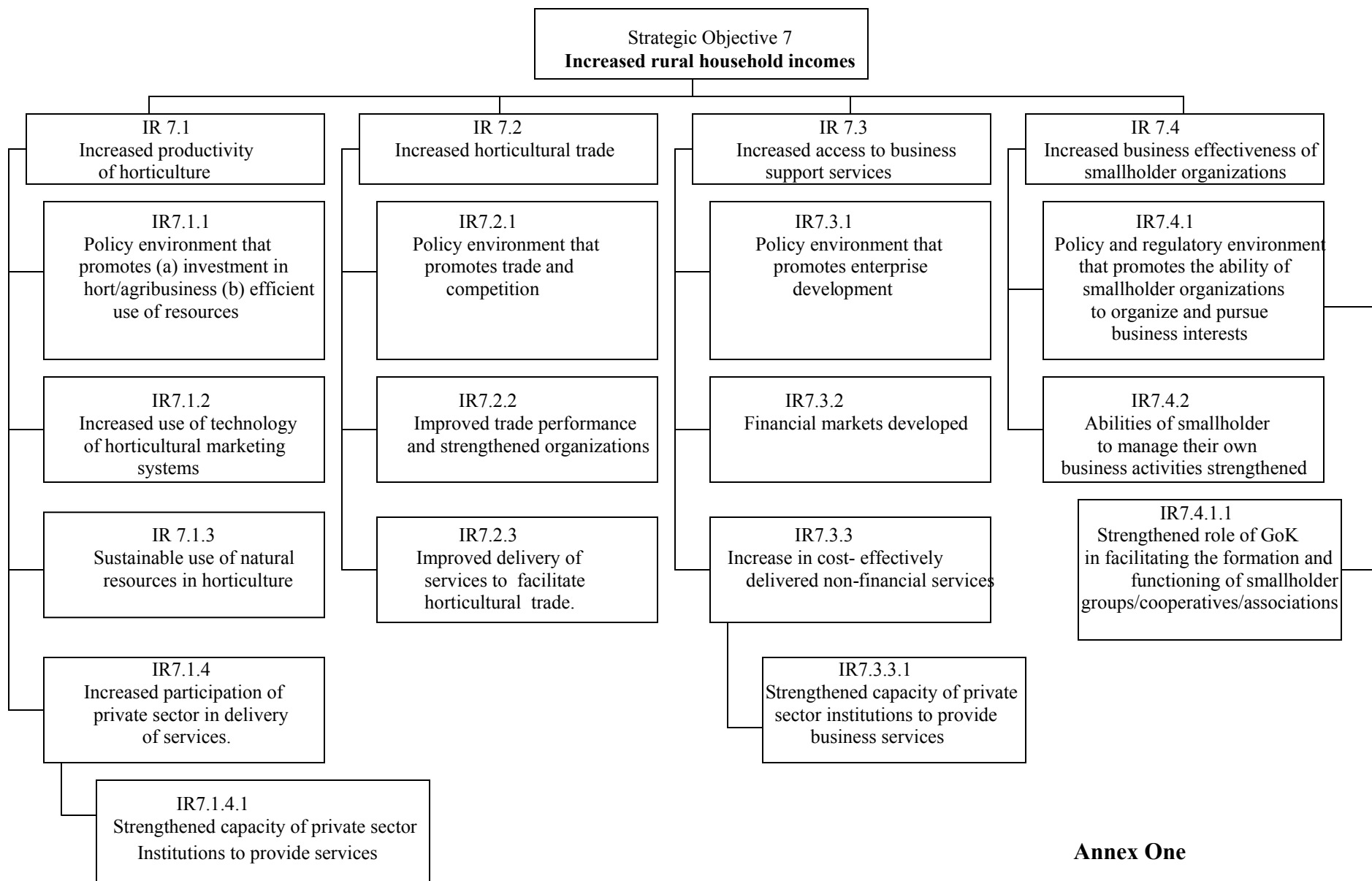
Other budget scenarios can be constructed by varying the number of FFS in each year as well as the number of districts included in the three budget categories of low, medium, and high (as shown in the above table).

It is important to note that past experiences with FFS, both in Kenya and other countries, show that a large majority of the FFS will continue operating without any external funding after the initial funding and support ends. FAO's experience in Kenya shows that in many locations farmers use their own resources to establish new FFS after the FAO support ends.

4. Performance Monitoring: Anticipated Performance Targets, Indicators and Baseline Information

The key indicators of the effectiveness of this activity should be:

- Adoption rates by farmers involved in the FFS, and by their non-participating neighbors, of the principles, methods and techniques of IPM.
 - Changes in the production costs, outputs, revenue and gross margins of the main crops of the farmers participating in FFS.
 - Chemical residue levels found in the produce of farmers involved in the FFS, as compared to non-participating farmers.
 - Percentage of FFS that continue in operation one year after the support of the program has come to an end, plus number of new FFS set up independently by CBOs with the support of graduates from the original FFS supported by this activity.
- Together with these quantitative data, it is important to assess the quality of the learning processes that are taking place in these FFS after the program is terminated.



Annex One

Annex Two Literature Reviewed

Availability (1/25/02): A= abstract; HC= hard copy; EC= electronic copy.

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Annex Three

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Environment and development IIED of United Kingdom.

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A Study of the Domestic Horticulture Sub-sector in Kenya. Tegemeo Institute of Agricultural Policy and Development. Egerton University. July 2001

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January 14, 2001

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Kenya Agricultural Research annual Report. Kenya Agricultural Research Institute, 1999

The Promoting of Farmer Innovations In Collaboration With The Farmer Field Schools.
Annual Report 2001

Annex Four **Interviewees**

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Annex Five

A. Specific Questions to be Answered (from the Horticulture Task Force):

Policy:

- a) Stakeholders identified the following as particular problems facing the horticultural export industry: high landing costs, high jet fuel costs, high interest rates, ineffective use of cess funds collected by the government, lengthy procedures for chemical registration, poor quality control of imported seeds, unclear plant protection policies, why local seeds/planting materials are more expensive than imported and lack of incentives for farmer-based seed production. The team will need to investigate these and determine which are the most constraining to the industry and which are ones that USAID might be able to address in its program.
- b) What are the gaps in legislation on intellectual property rights to provide improved incentives for research and development of improved varieties of horticultural crops? How can USAID's program facilitate development of improved seed varieties and in what ways can it assist in increasing information sharing on research activities within the region to increase business opportunities and gene base?
- c) What are the implications of the WTO for Kenyan horticultural exports? Are there particular issues that can be addressed through USAID assistance?
- d) The contractor will elaborate on the multiple roles of the Horticultural Crops Development Authority (GOK para-statal) and make recommendations on how USAID assistance might address some of the issues surrounding HCDA's role in the sector and the more general issue of the roles of government and the roles of private sector in horticultural development.
- e) Is there a need for an economic analysis of the horticultural industry production techniques to determine how to best deal with the MRL requirements and to identify areas of opportunity?

Technology Development and Transfer:

- f) Why is the cost of producing horticultural crops in Kenya higher compared to that of its neighboring countries? What interventions could be proposed to reduce the cost of production?
- g) Why is the rate of agricultural inputs (fertilizer, pesticides, improved seeds) utilization low in Kenya? To what extent is the low utilization rate attributable to lack of diversity in seed variety, low returns to new technologies, lack of research – farmer extension linkage, lack of technical assistance at the point of sale and differing resource base of farmers? How can these constraints be addressed and which appear to be the most constraining? Are there biotechnology interventions that might be appropriate to address some constraints, and is there appropriate capacity in Kenya to do so?
- h) What role should the public and private sectors play in provision of extension services and technology transfer to farmers? Currently exporters are providing

these services to their client outgrowers, leaving out the majority of horticultural farmers? NGOs and private sector often lack resources and capacity to adequately provide extension services. How can these gaps be best addressed? How can the private sector be strengthened to provide extension services?

Natural Resources Management:

- i) Water was identified by stakeholders as one of the most contentious issues on use of natural resources. There is a large demand, but no control over use and little enforcement of existing water use regulations, leading to conflicts. There are questions on whether smallholders are able to meet requirements for obtaining the necessary permits for water use. There may also be gender issues on access to water. What is nature of the problem and what recommendations can be made for USAID assistance?
- j) Are there problems with soil fertility management, salinity, siltation with horticulture farmers? If so, are farmers aware of the problems? What practices should farmers use to address these, and how can this program assist farmers in implementing these practices?
- k) Maximum Residue Levels will limit the ability of many small outgrowers to provide for the export market. There appears to be a lack of a comprehensive and unified approach by individual exporters to address this problem. How can USAID assistance be used to address this? Are there viable, economic biotechnology or organic alternatives to pesticide based management? How can USAID interventions be developed to increase awareness of pesticide use, handling and impact on the environment and human health?
- l) Is KEPHIS able to handle all the tasks they are responsible for regarding the implementation of MRL requirements and certifications? Identify capacity building needs that may exist in KEPHIS and other institutions that may be involved in MRLs.
- m) There are several small irrigation technologies developed - drip irrigation, treadle pumps. Should these become a technology to be encouraged through the USAID assistance? Are there gender and environment impact issues to be addressed with adoption of this technology? Are there other water-conserving irrigation technologies to be explored?
- n) What are research priorities for the horticultural sector for the next 5 years?

Private Sector Delivery of Services:

- a) Why has the private sector not moved to fill the vacuum in services once provided by government? What needs to be done to encourage more private sector participation?
- b) Should private sector be used for provision of services such as extension, credit, input provision? If so, what needs to be done to encourage this to happen?
- c) What role should private sector have in developing systems/institutions to provide bulk buying of inputs and other services?

- d) What role should private sector play in strengthening and improving management of smallholder groups?
- e) What role should private sector play in developing a more unified industry voice for horticultural development in Kenya? And in development of services such as information networking, establishment of a pool of funds to be used for the industry's research needs and addressing topical issues (such as MRL training, certifications, etc) and in setting industry standards and grades?

IR 7.2 The contractor will propose a policy reform agenda for trade, increasing competition, improve marketing systems and increase trade facilitation services in the horticulture sector, both for improved domestic and international marketing and trade. The contractor will propose interventions including, but not limited to addressing the following questions:

- a) How can competitiveness of Kenyan horticultural exports be improved in order to take advantage of regionalization and globalization opportunities? How can Kenya most efficiently look for new markets or new products for existing markets? What will be required in order for Kenya to remain competitive with other African nations (Uganda, Tanzania, Egypt) in horticultural exports?
- b) Air freight charges are often higher than in competitor countries due to low return cargo hauls, seasonal numbers of passenger flights (low season, decreased numbers of flights, thus decreased cargo capacity). Propose some strategies USAID might pursue to address this.
- c) What marketing/consumer strategies are needed to promote domestic horticultural markets in Kenya? Is there consumer demand in niche markets (organic, specific products, packaging, etc)? What are viable options for development of additional products, with different consumers and markets for diversified products?
- d) Currently, producers (outgrowers) are not accessing market information. Is this working to the disadvantage of outgrowers/smallholders in horticulture? Is this a problem equally for export oriented and domestic market producers? How can this be most effectively addressed?
- e) Outgrowers and smallholders seem to be unaware of market demand and market needs. They are also unaware of competitors' conditions, products and prices. How is this affecting production and revenues of smallholders? How can this be addressed?
- f) How should USAID build farmer to buyer linkages to enhance efficient marketing? What roles should the public and private sectors play in this?
- g) Is there a problem of credit access by farmers and exporters? If so, how much of a constraint is this, and what are the effects of lack of access (for example, in access to inputs, facilitating marketing services such as storage, bulking, etc)?
- h) With irrigation technologies, there is potential for increasing horticultural production in many of the semi-arid areas. However, these areas are often isolated from markets. Propose some approaches USAID might undertake to address this problem.
- i) Consumer prices are quite high, probably due to market inefficiencies. Possible contributing factors may include road blocks in Kenya and lack of information on

- prices, inputs. Identify likely components of such inefficiencies and propose interventions USAID may support to address these.
- j) Describe existing grades and standards for both domestic and for export markets for horticultural products. Are these sufficient? Are they enforced? Make recommendations for USAID interventions to address constraints in this area.

IR 7.4: The contractor will propose activities to strengthen and increase smallholder organizations' abilities to provide services to their members effectively and profitably. Activities will be developed to address the following questions including, but not limited to:

- a) Is there a need to change existing or develop new policies and regulatory frameworks to improve the effectiveness and efficiency of the various smallholder organizations (coops, companies, self-help groups, associations) in the horticultural industry? What should USAID's role be in this, if any?
- b) How could a USAID assistance program develop smallholder horticultural groups to address constraints of lack of access to credit, inputs and extension, commonly cited by experts in the industry? Would these be different if growers are producing for the export market vs. the domestic market? What incentives would producers have to join and be active members of such groups?
- c) Experience shows that smallholder group formation is usually most sustainable and effective if started by farmers themselves. What are some approaches in the horticultural industry to take such an approach? Will this be different for export oriented producers vs. domestic market producers?
- d) How should USAID's program address the problems associated with a smallholder-dominated market structure characterized by small quantities and varied quality of output? This is particularly complicated in the horticultural sector catering to an export market.
- e) Describe the benefits and disadvantages to linking such smallholder groups to private sector agencies? What kind of services would be best accessed and provided by such linkages, what kind would not best provided by such linkages? Is there an appropriate role for NGOs rather than private sector in some of these linkages (to act as an "honest broker" for example)?
- f) What are the key types of assistance needed by the smallholder organizations to strengthen their organizational, management and governance systems, and particularly for the export market, traceability; and enable them provide business services to their members more efficiently and profitably?
- g) What institutions and implementation framework are needed to address the common key constraints? What collaboration is needed to enhance the assistance provided by existing partners to smallholder organizations?
- h) What roles do the GOK, private sector, NGO's etc need to play to encourage formation of groups/cooperatives/associations and to strengthen them?

Annex Six

		EXPORT			DOMESTIC				
		Value Added [A]	High value [B]	High volume [C]	Institutional [D]	Super-markets [E]	Urban [G]	Peri-urban Rural [H]	Roadside Farm Gate [I]
<div style="display: flex; align-items: center;"> <div style="border-left: 1px dashed black; height: 100px; margin-right: 5px;"></div> <div style="display: flex; flex-direction: column; justify-content: space-around; align-items: center;"> <- -> <- -> <- -> <- -> <- -> </div> </div>	[1] Markets								
	[2] Post-Harvest								
	[3] Production								
	[4] Inputs								
	[5] Meta-institutions								
Income Source									
Ecological									
Socio-cultural Gender									

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The essential features of the approach that reflects this framework are:

- the value-chain domains from markets [1] through to meta-institution[5]
- the linkages between these, and in particular between [5] and the others [1-4]
- the market domain disaggregated into eight markets [A] through to [I]
- the sources of income disaggregated as functions of these different markets
- the impact of linkages between the value chain domains and both the natural environment (ecological) and socio-cultural (especially gender).

Annex 7

Gender Issues

Increasing market demand for horticultural produce within Kenya presents a range of opportunities for those who live in rural households to improve their incomes. These development dynamics are not however, without their risks and threats. Horticulture can also have profound socio-cultural impacts that include matters to do with the health and safety of consumer and producer alike, as well as with cultural and gender-related issues of inequity.

Horticultural production (the growing of vegetables) has traditionally been women's work. The rise of the export horticulture market, particularly the French bean market, has led to the commoditization and appropriation of horticulture by men. This has generated conflict between men and women over land, labor, and income as men usurp either the land allocated for, or the income derived from, horticulture (Dolan 1999). While there are no easy answers as to how these conflicts can be resolved, the design and implementation of future activities must consider potential conflicts.

Conflict is likely to arise with the commercialization of the domestic market for horticultural products. These conflicts arise because the commercialization of horticulture crops upsets the cultural norms that govern the division of labor and control of resources between women and men. The following three areas should be considered:

- Labor and time constraints of horticultural crops affect women's ability to participate in other activities including the planting and cultivation of subsistence crops.
- The gendered nature property rights affects women's access to land and the benefits derived from it. Women's access to land is determined by marital status, their household position, and decisions made about land use by male relatives. This highlights a horticulture dilemma relating to conjugal norms – the earnings from cash crops traditionally go to men while the income from vegetable crops have traditionally gone to women. Thus, when vegetables become viewed as 'cash crops' conflict arises. This is supported by Dolan's work in Meru where 33 percent of women interviewed claimed that their husbands had either compelled them to grow French beans on their usufruct plots (Usufruct land is property under male control which women have the rights both to cultivate and to retain the income derived from that production) or retracted their rights to them completely.
- There is a wide disparity in the distribution of income from export horticulture. Dolan's research showed that women perform 72 percent of the labor for French beans and obtain only 38 percent of the income. Traditionally, the cash needs of a family were the responsibility of men. While women's labor contributions are now contributing to the cash needs, their allocation of other household duties and responsibilities remain unchanged leading to an increased workload by women. Conflict often arises over the control of income derived from horticulture production. Dolan quotes one interviewee as stating, "Michiri (French beans) are also cause for beating. When we try to keep our money, our husband asks where it is. If we don't give it to him we are beaten. These crops cause us many problems."

Another important gender issue in export horticulture is women's employment conditions. Barrientos, Dolan, and Tallontire (2001) have developed a 'gender pyramid' of employment, which is useful for assessing gender issues. The key issues relating to the conditions of employment are categorized into three inter-linked levels of a pyramid. The top of the pyramid relates to general issues of employment confronted by both men and women including freedom of association, collective bargaining, safety and hygiene, equal and living wages, work hours, contracts, and discrimination. The middle section of the pyramid relates to employment issues that particularly affect women including provision of housing, training, workplace childcare, reproductive rights, maternity leave, transport, and occupational health. The base of the pyramid relates to broader socio-economic issues that affect women's ability to access particular types of work and income such as social norms and practice (as discussed earlier), domestic responsibilities, and gender relations.

Gender Pyramid

